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Material Safety Data Sheet

10CL Phosphate

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: 10CL Phosphate
Synonyms: Polyphosphate Glass

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4539

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communications Standard, (29CFR 1910.1200), this product contains no hazardous ingredients. All ingredients are TSCA listed.		N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Solid	Vapor Density (Air=1) 60-90° F: Solid
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): Solid
Solubility in H₂O: Complete	pH @ 1% Solution: 7.0 - 7.5
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Solid	Appearance: Clear glassy material
Specific Gravity H₂O=1 @25° C: Solid	Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.
Incompatibility: Strong oxidizer.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Results from acute toxicity testing show that the material would not be considered toxic as defined by the CPSC protocol. However, product has sharp edges which can cause skin abrasions.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Good First Aid should be followed in all cases of exposure.
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: Wash affected area thoroughly. Contact a physician if irritation develops.
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and dispose of with other solid wastes. Product is slippery when wet.

Waste Disposal Methods: Disposal of product should be in adherence with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Normally not required. **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet

6R Micromet

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: 6R Micromet
Synonyms: Inorganic Sodium Calcium Magnesium Phosphate

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4265

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communication Standard, 29CFR 1910.1200, this product contains no hazardous ingredients. All ingredients are TSCA listed.	N/A	N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: Solid	Vapor Density (Air=1) 60-90° F: Solid
Evaporation Rate: (ether=1) N/A	VOC Content (% by wt.): Solid
Solubility in H₂O: Complete	pH @ 1% Solution: 7.0-7.5
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Solid	Appearance: Granular, glass-like particles.
Specific Gravity H₂O=1 @25° C: Solid	Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus is essential.
Unusual Fire and Explosion Hazards: None Known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.
Incompatibility: Strong acids and bases.
Hazardous Decomposition Products: None Known.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: Instillation of 0.1% and 5% solutions of a chemically related compound in rabbit eyes followed by irrigation caused no serious injury. SKIN: Toxicity testing on a chemically related compound has shown it to be only mildly irritating to rabbit skin following a 24HR. exposure. However, product has sharp edges which may cause skin abrasion. INGESTION: According to toxicity testing on a chemically related product, it is only moderately toxic through ingestion. The acute oral LD50 (rats) is 2900mg/kg.
B. SUBCHRONIC, CHRONIC, OTHER: The chemically related compound did not exhibit genetic activity when tested according to the Ames assay. Data from a reproduction study using rats fed a diet of 0.5% of that compound and carried through three generations showed no deficiencies, malformations or chronic effects.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Good First Aid should be followed in all cases of exposure. In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

SKIN: If contact is made, rinse and wash skin thoroughly.

INGESTION: If swallowed, drink plenty of water and contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and repackage. Hose spill area well since product can make floors slippery.

Waste Disposal Methods: Dispose of in a landfill in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required.

Eye Protection: Safety glasses. **Gloves:** Not required for normal use.

Other Clothing and Equipment: Not required.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Store in a dry place. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Adhesive

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Adhesive
Synonyms: General Purpose Adhesive

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4080

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# hexane (STEL 1000ppm)	110-54-3	< 50	50ppm	50ppm
Acetone	67-64-1	< 25	750ppm	1000ppm
Isobutane/propane blend (STEL NE)	74-98-6 75-28-5	< 25	1000ppm 800ppm	1000ppm 800ppm

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR372.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: @70°F: 55 psig

Evaporation Rate: (ether=1): <1

Solubility in H₂O: Negligible

Freezing Point °F: N/AV

Boiling Point °F: Propellant 43.7

Specific Gravity H₂O=1 @25° C: Propellant 43.7

Vapor Density (Air=1) 60-90° F: >1

VOC Content (% by wt.): 85

pH @ 1% Solution: N/AV

pH as Distributed: N/AV

Appearance: Cream-colored liquid

Odor: Fruity odor

IV - FIRE AND EXPLOSION

Flash Point F: (non-aerosols) N/A **Flammable Limits:** LEL: N/E UEL: N/E

Extinguishing Media: Carbon dioxide, dry chemical or foam.

Special Fire Fighting Procedures: Water may be used to keep fire exposed containers cool. Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Do not spray near open flame. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting. Vapors can accumulate in low places and be ignited by source distant from point of release.

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat, sparks, sunlight, flame.

Incompatibility: Oxidizers

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: May irritate upper respiratory system. Vapors in high concentration may produce light-headedness, headache, dizziness, anesthesia, unconsciousness. EYES & SKIN: Causes irritation. INGESTION: Harmful or fatal if swallowed.

B. SUBCHRONIC, CHRONIC, OTHER: Prolonged skin exposure may cause dermatitis. Repeated exposure to hexane has been associated with nervous system damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain, nervous system, kidney and liver damage.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If symptoms persist, get medical attention.

EYES: Flush with copious amounts of water. If irritation persists, see a physician.

SKIN: Wash area with soap and plenty of water. Remove and launder contaminated clothing before reuse.

INGESTION: Call a physician at once. Do NOT induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition. Ventilate, avoid breathing vapors. Remove with inert absorbent for incineration.

Waste Disposal Methods: Do not incinerate containers. Dispose of in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH-approved respirator with vapor cartridge if levels are exceeded.

Eye Protection: Safety glasses with sideshields **Gloves:** Nitrile or neoprene

Other Clothing and Equipment: None Given.

Ventilation: Local exhaust is recommended; general may be needed in low areas.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature as exposure to direct sunlight or heat may cause bursting.

Additional Information: Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame.

NFPA

Health Hazard: 2

Fire Hazard.....: 3

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 3

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

Break-N-Lube

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Break-N-Lube

Product Number: 4128

Synonyms: Aerosol Lubricant

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Petroleum Distillate (Hydrotrated)	64742-47-8		5mg/m3 (mist)	5mg/m3 (mist)
Petroleum Oil	64742-53-6		5mg/m3 (mist)	5mg/m3 (mist)
Petroleum Distillate	64742-88-7		100	100
Carbon Dioxide	124-38-9		5000	5000

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: PSIG @ 70°F (Aerosols): 70-90

Vapor Density (Air=1) 60-90° F: >1

Evaporation Rate: (water =1): greater than 1

VOC Content (% by wt.):

Solubility in H₂O: Negligible

pH @ Solution:

Freezing Point °F:

pH as Distributed:

Boiling Point °F: N/A

Appearance: Opaque, tan liquid

Specific Gravity H₂O=1 @25° C: (H₂O=1):

Odor: Solvent

Concentrate only 0.81

IV - FIRE AND EXPLOSION

Flash Point F: (non-aerosols): (liquid concentrate only): greater than 170°F **Flammable**

Limits: LEL: N/EUEL: N/E

Extinguishing Media: Foam, dry chemical, carbon dioxide.

Special Fire Fighting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Do not expose aerosols to temperatures above 130°F

or the container may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable. Avoid open flame, welding arcs, heat, sparks.

Incompatibility: (Mat. to avoid): Strong oxidizing agents.

Hazardous Decomposition Products: Carbon Dioxide, carbon monoxide trace oxides of sulfur in addition to unknown organic compounds.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) INHALATION-INGESTION & SKIN ABSORPTION.

Excessive inhalation of mists or vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation. Eye irritant. Skin irritant due to defatting of skin. Possible chemical pneumonitis if aspirated into lungs.

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormality, liver abnormalities, lung and kidney damage.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin, or upper respiratory conditions.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Move to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for 15 minutes. If irritated, seek medical attention.

SKIN: Wash with soap and water. If irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.

Eye Protection: Safety glasses recommended. **Glove:** Neoprene, nitrile or other solvent resistant gloves.

Other Clothing and Equipment: None. HYGIENIC WORK PRACTICES: Wash with soap and water before handling food.

Ventilation: Adequate ventilation to keep vapor concentration below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Additional Information: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination.

NFPA

Health Hazard.....: 2

Fire Hazard.....: 3

Reactivity.....: 0

Specific Hazard...:

HMIS RATING

Health Hazard.....: 2

Fire Hazard.....: 3

Reactivity.....: 0

Personal Protection...: X (Sec. 9)

Revision Date: 07/18/2006

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Material Safety Data Sheet Aerosol CalClean

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol CalClean
Synonyms: Detergent Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4081

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	5	NE	NE
Isobutane	75-28-5	<7	800ppm	800ppm
Propane	74-98-6	<7	1000ppm	1000ppm

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 25-35 psig
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Completely
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.08

Vapor Density (Air=1) 60-90° F: Heavier
VOC Content (% by wt.): 7
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: N/A
Odor: N/A

IV - FIRE AND EXPLOSION

Flash Point F: (non-aerosols) N/A **Flammable Limits:** Non-flammable per USA Flame Projection Test for aerosols
Extinguishing Media: Carbon dioxide, dry chemical or foam.
Special Fire Fighting Procedures: Water may be ineffective. Water may be used to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards: Do not spray near open flame. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Do not store above 120°F
Incompatibility: N/A
Hazardous Decomposition Products: By open flame: Carbon monoxide, Carbon dioxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES, SKIN & INHALATION: In a confined area vapors in high concentration are anesthetic. Irritant to skin and upper respiratory system. Over exposure may result in light-headedness, staggering gait, giddiness and possible nausea. INGESTION: Harmful or fatal if swallowed.
B. SUBCHRONIC, CHRONIC, OTHER: None Known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient to fresh air. If symptoms persist, get medical attention.

EYES: Flush with water for at least 15 minutes. If irritation develops, get medical attention.

SKIN: Wash with soap and water.

INGESTION: Call physician immediately. Do NOT induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition, ventilate. Avoid breathing vapors and remove with inert absorbent.

Waste Disposal Methods: Do not incinerate. Replace protective cap and discard in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing of vapor or spray mist.

Eye Protection: Safety glasses **Gloves:** Rubber

Other Clothing and Equipment: N/AV

Ventilation: Local exhaust ventilation in volume and pattern to keep air levels below acceptable limits

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting

Additional Information: Do not puncture or incinerate. Do not spray near fire or open flame. Keep away from children.

NFPA

Health Hazard: 0

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 2

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Degreasing Solvent

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Degreasing Solvent
Synonyms: Chlorinated Hydrocarbon Solvent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4083-75

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Stoddard Solvent* (ORAL LD50 > 10mg/kg)	8052-41-3	60	100ppm	0 ppm
p-Chlorobenzotrifluoride(a)	98-56-6	<10	N/A	N/A
o-Chlorotoluene	95-49-8	<25	50 ppm	250 ppm
Perchloroethylene(b,c,d,e,f,g)	127-18-4	<15	25 ppm	25 ppm
Isobutane/Propane Blend	75-28-5	<5	800 ppm	800 ppm
	74-98-6)		1000 ppm	1000 ppm

*STEL=200pp

a) This item is not identified in the available haz. chemicals guides. However, its characteristics parallel hazards of material that is identified;

herefore, it will be so identified until further identification.

b) Ingredient subject to reporting under Sec. 313 of Title III (SARA) and 40 CFR 372.

c) RCRA has determined that the waste for this chemical is listed as hazardous and must be handled in accordance with 40 CFR 260-281.

d) CERCLA has notification requirements for releases or spills to the environment of the Reportable Quantity(RQ 100lbs) or greater amounts (40CFR302).

e) Material is on the NTP list of possible carcinogens, IRAC's list of possible carcinogens, OR is regulated by OSHA as a possible carcinogen.

f) Indicates listing in Table Z-2, 29 CFR 1910.1000, detailing acceptable ceiling concentration limits and acceptable maximum peak above ceiling concentration for an 8-hour shift.

g) California Prop. 65 - This compound is known to the state of California to cause cancer.

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 10 @ 20°C

Evaporation Rate: (ether=1): <1

Solubility in H₂O: Negligible

Freezing Point °F: N/A

Boiling Point °F: 260-380°F (concentrate only)

Specific Gravity H₂O=1 @25° C: 0.910 (conc. only)

Vapor Density (Air=1) 60-90° F: >1

VOC Content (% by wt.): 84%

pH @ Solution: N/A

pH as Distributed: N/A

Appearance: Clear liquid

Odor: Hydrocarbon Odor (VOC's: 5.8 lbs/gal)

IV - FIRE AND EXPLOSION

Flash Point F: >140°F (estimated) **Flammable Limits:** LEL: 1.0; UEL 7.0

Extinguishing Media: Dry Chemical, foam, CO₂, water, water fog

Special Fire Fighting Procedures: Must wear full facepiece, self-contained breathing apparatus in positive pressure mode. Do not use solid stream of water; use fine water spray.

Unusual Fire and Explosion Hazards: Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water. Caution: material is combustible.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable/Extreme temperatures, open flame, sparks.

Incompatibility: Strong oxidizers, strong acids.

Hazardous Decomposition Products: Thermal decomposition may yield CO, CO₂, HCL fumes, phosgene.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Acute effects are possible irritation and discomfort; chronic exposure may cause liver, kidney or central nervous system damage. Perchloroethylene is a suspected cancer risk from animal studies, and is listed under IRAC as Group 28, possibly carcinogenic to humans.

B. SUBCHRONIC, CHRONIC, OTHER: **INHALATION:** High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting or even death in confined or poorly ventilated areas. The primary effect of inhalation is narcosis. **SKIN:** Brief contact may cause slight irritation; prolonged contact may cause moderate irritation or dermatitis. Problem may be accentuated by liquid becoming trapped against the skin by contaminated clothing and shoes. **EYES:** High vapor concentration or contact may cause irritation, discomfort or pain. May cause slight transient corneal injury. **INGESTION:** Swallowing this material may result in irritation of the mouth and GI tract. Vomiting and subsequent aspiration in to the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin or upper respiratory conditions.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air; provide oxygen if breathing is difficult; administer CPR if victim is not breathing; seek medical attention.

EYES: Flush with water for 15 minutes, holding eyelids open; if irritation persists, seek medical attention.

SKIN: Remove contaminated clothing; wash effected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

INGESTION: If conscious, drink large amounts of water; DO NOT INDUCE VOMITING; take immediately to hospital. Do not give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: COMBUSTIBLE Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center at (800) 424-8802; refer to CERCLA 40 CFR 302 and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements. Incinerate or land fill according to local, state or Federal regulations. Do not flush to sewer.

Waste Disposal Methods: Aerosols can when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH-approved respirator must be worn if OSHA threshold limits exceeded.

Eye Protection: Goggles with side shield. **Gloves:** Solvent- resistant rubber or neoprene.

Other Clothing and Equipment: Safety eye bath near by.

Ventilation: Local and mechanical exhaust is required.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Material is combustible. Should be stored in tightly closed containers in cool, well ventilated area. Vapor may form explosive mixtures in air. All Sources of ignition should be controlled. Keep this and other chemicals out of reach of children; minimize body contact with this product as well as all chemicals. Avoid inhaling concentrated fumes or vapors. Avoid contamination of food.

Additional Information: Vapors are heavier than air and will collect in low areas. Use only in well-ventilated areas that will maintain air levels below limits established by federal, state, and local regulations.

NFPA

Health Hazard: 1
Fire Hazard.....: 2
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard..... : 2
Fire Hazard : 3
Reactivity : 0
Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Electrical Contact Cleaner

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Electrical Contact Cleaner
Synonyms: Aerosol Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4082

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Isopropanol	67-63-0	5-15 %	400 ppm	500 ppm
2-Methylpentane	107-83-5	43-48%	500 ppm	500 ppm
3-Methylpentane	96-14-0	20-25%	500 ppm	500 ppm
2,3 Dimethylbutane	79-29-8	10-15%	500 ppm	500 ppm
2,2 Dimethylbutane	75-83-2	>0.01%	500 ppm	500 ppm
Carbon Dioxide	124-38-9	2-6%	5000 ppm	5000 ppm
n-Hexane#	110-54-3	1-3%	50 ppm	50 ppm

Ingredient subject to reporting
under Section 313 of Title III
(SARA)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Psig@70°F(aero.)80-100
Evaporation Rate: N/E
Solubility in H₂O: None
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: Concentrate Only =
0.667

Vapor Density (Air=1) 60-90° F: N/E
VOC Content (% by wt.): 100
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: Clear, forceful spray
Odor: Aliphatic solvent odor

IV - FIRE AND EXPLOSION

Flash Point F: Flash Point not established; FLAMMABILITY as per USA FLAME PROJECTION TEST for aerosols:
EXTREMELY FLAMMABLE **Flammable Limits:** N/A N/A
Extinguishing Media: Foam, Dry Chemical, Carbon Dioxide
Special Fire Fighting Procedures: Self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Do not expose aerosols to temps. above 130°F, container may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Open flame, welding arcs, heat & sparks.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide & carbon monoxide
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation of vapors can cause nasal & respiratory irritation, weakness, nausea, headache, dizziness, asphyxia and possible unconsciousness. EYES: Slight irritation. SKIN: Slight irritation due to defatting of skin. INGESTION: Irritation

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin or upper respiratory conditions.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for 15 minutes. If irritation persists, see a physician.

SKIN: Wash area with soap and plenty of water. If irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get medical attention immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by NIOSH for organic vapor.

Eye Protection: Safety glasses **Gloves:** Neoprene.

Other Clothing and Equipment: None.

Ventilation: Adequate ventilation to keep vapor concentration below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 130°F. Do not puncture or incinerate containers.

Additional Information: Keep away from children. Wash with soap & water before handling food.

NFPA

Health Hazard: 2

Fire Hazard.....: 3

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 3

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol EM Degreasing Solvent

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol EM Degreasing Solvent
Synonyms: Aerosol Motor Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4083

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
trichloroethylene	79-01-6	<55	50 ppm	50 ppm
perchloroethylene	127-18-4		25 ppm	25 ppm

Ingredient subject to reporting
under Section 313 of Title III
(SARA) and 40 CFR 372.

WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: @20°C: 85-100 psig
Evaporation Rate: 2.1 concentrate only
Solubility in H₂O: Insoluble
Freezing Point °F: N/AV
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.6

Vapor Density (Air=1) 60-90° F: N/E
VOC Content (% by wt.): 100
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: Clear, colorless spray
Odor: Chlorinated solvent odor

IV - FIRE AND EXPLOSION

Flash Point F: propellant <20°F **Flammable Limits:** N/E N/E
Extinguishing Media: CO₂, foam, dry chemical
Special Fire Fighting Procedures: Self contained breathing apparatus.
Unusual Fire and Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Open flame, high temperatures, welding arcs.
Incompatibility: Reactive metals aluminum, magnesium, strong oxidizing agents.
Hazardous Decomposition Products: CO₂, CO, HCl, small amounts of phosgene and chlorine.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation of vapors can be harmful and may cause headaches, dizziness, asphyxia, anesthetic effects and possible unconsciousness. EYES: Irritation SKIN: Irritation due to defatting of skin. INGESTION: Possible chemical pneumonitis if aspirated into lungs. Nausea.

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for 15 minutes. If irritation persists, see a physician.

SKIN: Wash area with soap and plenty of water. If irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by U. S. Bureau of Mines for organic vapor.

Eye Protection: Safety glasses **Gloves:** Neoprene

Other Clothing and Equipment: None.

Ventilation: Adequate ventilation to keep vapor concentration below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 130°F. Do not puncture or incinerate containers.

Additional Information: Keep away from children. Avoid food contamination. Avoid inhalation of vapors.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Evap Foam No Rinse

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Evap Foam No Rinse
Synonyms: Aerosol Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4171

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Diethylene glycol monoethyl ether*	111-90-0	2.0	N/E	N/E
Ethylene glycol monobutyl ether*	111-76-2	2.0	25 ppm	50 ppm
Propellant	68956-79-6	5.0	1000 ppm	1000 ppm

*SARA Section 313 Listed VOC Content: 9.39% By Weight

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (psig @ 25°C) 50 psig
Evaporation Rate: (Butyl Acetate=1) <1
Solubility in H₂O: Soluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.02

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): 9.39% By Weight
pH @ 25°C Solution: 12.0
pH as Distributed: N/E
Appearance: White foam
Odor: Sweet

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** None
Extinguishing Media: CO₂, Standard Foam, Dry Chemical, Halon
Special Fire Fighting Procedures: Wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Exposure to temperature above 120°F may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Avoid contact with strong oxidizing agents, heat above 120°F.
Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide
Conditions Contributing to Hazardous Polymerizations: Product will not undergo hazardous polymerization.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: May cause irritation, redness, or watering. SKIN: May cause irritation to persons with sensitive condition. INGESTION: May cause nausea, vomiting, stomach discomfort. INHALATION: Over exposure may cause nausea, vomiting, upper respiratory discomfort.

B. SUBCHRONIC, CHRONIC, OTHER: (Medical Condition Aggravated by Exposure): Skin sensitivity, chemical allergies, heart condition.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.

EYES: Flush with water for 15 minutes. If irritation persists, seek medical attention.

SKIN: Wash with soap and water. If irritation persists, seek medical attention.

INGESTION: Do not induce vomiting. Seek medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spill - Absorb liquid with vermiculite, floor absorbent or other absorbent material. Large spill - Evacuate area. Remove all sources of ignition. Contain liquid. Prevent run-off to sewer.

Waste Disposal Methods: Dispose of spilled material in accordance with all applicable local, state and federal regulations. Wrap empty container in paper and place in trash.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not Required

Eye Protection: Safety goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: For short usages, no safety equipment required.

Ventilation: General ventilation recommended to control the level of vapors.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep out of the reach of children. Do not store where temperatures exceed 120°F. Wash hands before eating or smoking after using aerosol.

Additional Information: N/A

NFPA

Health Hazard: 2

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Food Grade Silicone

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Food Grade Silicone
Synonyms: Aerosol Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4084

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Poly-Dimethylsiloxane	63148-62-9	4-12	N/E	N/E
Hexane	110-54-3	40-50	50ppm	50ppm
Isobutane/propane blend	75-28-5; 74-98-6	40-50	800 ppm	800 ppm

#Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: PSIG @ 70°F: Max 60
Evaporation Rate: (ether=1)
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.695

Vapor Density (Air=1) 60-90° F: N/E
VOC Content (% by wt.): 95
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear colorless spray
Odor: Ketone odor

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** Extremely Flammable

Extinguishing Media: CO₂, dry chemical, or foam.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus. Use water fog to prevent rupturing & exploding containers. Provide shielding for personnel.

Unusual Fire and Explosion Hazards: Do not expose aerosols to temperature above 130°F or container may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - avoid open flame, sparks, heat, welding arc.

Incompatibility: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation. EYES: Irritation. SKIN: Irritation due to defatting of skin. INGESTION: Possible chemical pneumonitis is aspirated into lungs.

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of this mixture)
Excessive inhalation of hexane may cause nerve damage. May aggravate existing eye, skin, or upper respiratory conditions.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for at least 15 minutes. If irritated, seek medical attention.

SKIN: Wash with soap and water. If irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER. CAUTION: Silicone makes surfaces slippery.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by NIOSH in a positive pressure mode.

Eye Protection: Safety glasses **Gloves:** Neoprene

Other Clothing and Equipment: None

Ventilation: Provide local exhaust ventilation to keep TLV of all hazardous ingredients below acceptable limits and LEL in section II below stated limit.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 130°F. Do not puncture or incinerate.

Additional Information: Keep away from children. Do not spray near fire or open flame.

NFPA

Health Hazard: 2

Fire Hazard.....: 4

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 4

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET Nu-Brite, Aerosol

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Nu-Brite, Aerosol

Product Number: 4291-18

Synonyms: Alkaline cleaner/degreaser

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Caustic Soda, 50%	1310-73-2	10-20		2mg/m3
monoethanolamine	141-43-5	1-5		3 ppm
liquefied petroleum gas**	98476-85-7	1-10		1000 ppm

**2500 ppm ACGIH Exposure Limits

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 50 psi	Vapor Density (Air=1) 60-90° F: 1.55
Evaporation Rate: < ether	VOC Content (% by wt.): Not determined
Solubility in H₂O: Partial	pH @ Solution: N
Freezing Point °F: Not determined	pH as Distributed: 13
Boiling Point °F: Not determined	Appearance: aerosol spray
Specific Gravity H₂O=1 @25° C: 1.10 (concentrate)	Odor: chemical fragrance

IV - FIRE AND EXPLOSION

Flash Point F: Not determined **Flammable Limits:** LEL 10.8%UEL 9.5%

Extinguishing Media: Water fog or fine spray. Carbon dioxide, dry chemical, foam, alcohol-resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function but much less effectively.

Special Fire Fighting Procedures: Keep people away. Isolate fire area and deny unnecessary entry.

Unusual Fire and Explosion Hazards: Material is highly volatile and readily gives off vapors which may travel along the ground and be ignited pilot lights, flames, sparks, heaters,

smoking, electric motors, static discharges or other ignition source distant from the handling point.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions - Keep away from heat, sparks and open flames.

Incompatibility: Avoid contact with strong oxidizing agents, strong alkalis and strong mineral acids. Can react with reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixture with air.

Hazardous Decomposition Products: Burning can produce CO and /or carbon dioxide and trace of phosgene gas

Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) EFFECTS OF OVER-EXPOSURE: Shortness of breath, dizziness, and light-headedness. Can cause eye irritation, skin irritation, dermatitis. Can cause chemical pneumonia if aspirate into lungs. EYE: Exposure can cause irreversible eye damage or injury. Gas phase not expected to cause eye irritation. Liquid phase can cause frostbite and burns. SKIN: Exposure can cause irreversible damage, burns or frostbite. INHALATION: May be harmful or fatal. May cause damage to nasal and respiratory passages. Gas is an asphyxiate and may exhibit anesthetic properties at high concentrations. INGESTION: May be harmful or fatal. Results in severe damage to mucous membranes and deep tissues.

B. SUBCHRONIC, CHRONIC, OTHER: Prolonged exposure above the OSHA permissible exposure limits (PEL) may result in kidney and liver damage.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None recognized.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove individual to fresh air. Give oxygen if breathing is labored. If breathing has stopped, give artificial respiration. Keep person warm and quiet. Seek medical attention.

EYES: Flush with large amounts of water for at least 20 minutes. Lift upper and lower eyelids occasionally. Get medical attention.

SKIN: Thoroughly flush exposed skin with soap and water.

INGESTION: If swallowed, do not induce vomiting. Immediately drink two glasses of water. Never give anything to an unconscious person. Get medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Isolate spill or leak area immediately. Keep unauthorized personnel away. Ventilate area and eliminate all ignition sources. Small spills: clean up with inert materials and dispose of in accordance with all local, state and federal regulations. Large spills: not applicable due to aerosol package.

Waste Disposal Methods: Empty aerosol containers may be disposed of through normal channels. Full or partially full containers are considered hazardous waste and must be disposed of accordingly.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Personal protective equipment is recommended for prolonged or repeated contact.

Eye Protection: Chemical splash goggles or face shield **Glove:** Chemical resistant gloves

Other Clothing and Equipment: As required.

Ventilation: General ventilation may be adequate for maintaining airborne concentrations below established exposure limits. If general ventilation is inadequate, supplemental local exhaust may be required. Where explosive mixture may be present, systems safe for such locations should be used. Other special precautions, such as respiratory protection, may be required if airborne concentrations cannot be reduced to below the established exposure limits.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep containers tightly closed. Isolate from heat, sparks and open flames. Closed container may explode when exposed to extreme heat.

Additional Information:

NFPA

Health Hazard.....: 4

Fire Hazard.....: 3

Reactivity.....: 0

Specific Hazard...:

HMIS RATING

Health Hazard.....: 4

Fire Hazard.....: 3

Reactivity.....: 0

Personal Protection...: X (Sec. 9)

Revision Date: 06/22/2006

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Material Safety Data Sheet Aerosol Nu-Kill

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Nu-Kill
Synonyms: (Aerosol) Pesticides - Wasp & Hornet
EPA Regis. No. 10807-48-65516
EPA Est. No. 10807-GA-1

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4292

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Acetone	67-64-1	<10	350ppm	350ppm
Pyrethrin	8003-34-7	<5	5mg/m3	5mg/m3
Isopropanol	67-63-0	<5	400ppm	500 ppm
Insecticide Concentrate: 0.5	114-26-1	<5	0.5mg/M3	0.5mg/M3
propoxur **	51-03-6		N/E	N/E
Piperonyl butoxide, Technical **	113-48-4		N/E	N/E
N-octyl bicycloheptene dicarboximide				
** SARA III Listed				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): >ether
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.7819

Vapor Density (Air=1) 60-90° F: >air
VOC Content (% by wt.): 99
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Pesticides
Odor: Pesticides

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** N/A
Extinguishing Media: Carbon dioxide, dry chemical or foam.
Special Fire Fighting Procedures: Water may be ineffective. Water may be used to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards: Do not spray near open flame or expose to temperatures above 130°F. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Overexposure in confined area. Open flame, welding arcs, extreme heat, sparks
Incompatibility: Alkaline materials and water
Hazardous Decomposition Products: By open flame: Carbon Monoxide, Carbon Dioxide,
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): In a confined area vapors in high concentration are anesthetic. Irritant to skin and upper respiratory system. Over-exposure may result in headache, dizziness, asphyxia, anesthetic effects, and possible unconsciousness. Irritant to eyes and skin. Possible chemical pneumonitis if aspirated into lungs. Nausea.

B. SUBCHRONIC, CHRONIC, OTHER: Repeated and prolonged overexposure (to raw materials) may cause cardiac abnormalities, central nervous system depression, lung, kidney, liver damage; inhibits cholinesterase.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary; seek medical attention

EYES: Flush with water for at least 15 minutes; if irritated, seek medical attention.

SKIN: Flush with soap and water for at least 15 minutes; if irritated, seek medical attention.

INGESTION: GET MEDICAL ATTENTION IMMEDIATELY. Atropine sulfate is antidote. Treat like typical organic phosphate poisoning. Induce vomiting only at physician's recommendation.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition, ventilate, avoid breathing vapors. Remove with inert absorbents.

Waste Disposal Methods: Do not incinerate - dispose of in accordance with federal, state and local regulations regarding pollution.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing vapor or spray mist.

Eye Protection: Safety glasses **Gloves:** Disposable

Other Clothing and Equipment: Protective gloves for prolonged or repeated contact. Use gloves recommended by glove supplier for protection against materials in Section II.

Ventilation: Provide local exhaust ventilation in volume and pattern to keep TLV of all hazardous ingredients in Section II below acceptable limit, and LEL in Section II below stated limit.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature to avoid bursting. Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame.

Additional Information: None.

NFPA

Health Hazard: 2

Fire Hazard.....: 3

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 3

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet Aerosol Nu-Kill II

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Nu-Kill II
Synonyms: Aerosol Wasp & Hornet Spray

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4292-75

EPA Regis. No. 10807-196-65516
EPA Est. No. 10807-GA-1

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Petroleum Distillate	64742-47-8	N/E	N/E	N/E
**Tetramethrin (0.1-0.2%)	7696-12-0	N/E	N/E	N/E
**Permethrin (0.1-0.4%)	52645-53-1	N/E	N/E	N/E
**Piperonyl Butoxide	51-03-6	N/E	N/E	N/E

**This ingredient is SARA III listed.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: @ 70°F (Aerosols): 85-100
Evaporation Rate: N/A
Solubility in H₂O: None
Freezing Point °F:
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.80

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Jet stream spray
Odor: Petroleum distillate

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** Per USA Flame Projection Test (aerosols): Non Flammable
Extinguishing Media: Carbon dioxide, dry chemical or foam.
Special Fire Fighting Procedures: Self-contained breathing apparatus
Unusual Fire and Explosion Hazards: Do not spray near open flame or expose to temperatures above 130°F. or container may burst.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Overexposure in confined area. Open flame, welding arcs, extreme heat, sparks.
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: CO₂, CO
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): In a confined area vapors in high concentration are anesthetic. Irritant to eyes and skin; may cause mild defatting of skin. Irritant to upper respiratory system. Excessive inhalation of vapors can be harmful and may cause headache, dizziness, anesthetic effects, respiratory depression, cholinesterase depression and nausea.

B. SUBCHRONIC, CHRONIC, OTHER: Repeated and prolonged overexposure (to raw materials) may cause cardiac abnormalities, central nervous system depression, lung, kidney, liver damage; inhibits cholinesterase.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin or upper respiratory conditions.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary; seek medical attention

EYES: Flush with water for at least 15 minutes; if irritated, seek medical attention.

SKIN: Flush with soap and water for at least 15 minutes; if irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Dispose of in accordance with local, state or federal regulations. Do not flush to sewer.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing vapor or spray mist.

Eye Protection: Safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective gloves for prolonged or repeated contact. Use gloves recommended by glove supplier for protection against materials in Section II.

Ventilation: Provide local exhaust ventilation in volume and pattern to keep TLV of all hazardous ingredients in Section II below acceptable limit.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature to avoid bursting. Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Pan-Spray

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Pan-Spray
Synonyms:

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4296

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Hydrocarbon Propellant	68476-86-8		800	800
Dichloromethane	75-09-2		25	500
n-Tallowalkyl Trimethylene	61791-53-5		N/E	N/E
Diamines Ole.	N/E		N/E	N/E
Petroleum Asphalt				
Dichloromethane is on Sara 313 List				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: PSIG @ 70°F (Aerosols) N/D
Evaporation Rate: N/E
Solubility in H₂O: Nil
Freezing Point °F: N/E
Boiling Point °F: N/E
Specific Gravity H₂O=1 @25° C:

Vapor Density (Air=1) 60-90° F: N/D
VOC Content (% by wt.):
pH @ Solution:
pH as Distributed: N/E
Appearance: White asphalt
Odor: Asphalt

IV - FIRE AND EXPLOSION

Flash Point F: Level 2 **Flammable Limits:** Lower - 1.0 Upper - 6.0

Extinguishing Media: Foam, dry chemical, carbon dioxide, water

Special Fire Fighting Procedures: Use water spray to cool fire exposed surfaces and to protect personnel, isolate "fuel" supply from fire. Avoid spraying water directly into storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

Unusual Fire and Explosion Hazards: Contents under pressure. Do not expose aerosols to temperatures above 130°F or the container may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Open flame, welding arcs, heat.

Incompatibility: Strong oxidizers

Hazardous Decomposition Products: Carbon Monoxide, carbon dioxide

Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excess inhalation may produce symptoms of central nervous system depression, ranging from light-headedness, nausea and vomiting, to unconsciousness and death. EYES: An irritant of the eyes, causing pain, lacrimation and general inflammation. SKIN: Mildly irritating to the skin. Skin contact may produce burning sensation - prolonged or repeated contact may cause skin to become reddened, rough, and dry due to removal of natural oils and may result in dermatitis. INGESTION: May cause irritation to the gastrointestinal tract with vomiting. If vomiting results in aspiration, chemical pneumonia may follow. Absorption through the gastrointestinal tract may produce symptoms of central nervous system depression ranging from light headedness to unconsciousness.

B. SUBCHRONIC, CHRONIC, OTHER: Can cause headaches, mental confusion, depression, fatigue, loss of sense of balance, and visual disturbances. Excessive exposure may cause cardiac arrhythmias, carboxyhemoglobinemia, liver and kidney effects.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin or upper respiratory conditions.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: DO NOT INDUCE VOMITING. Call a physician and/or transport to emergency facility immediately.

NOTE TO PHYSICIAN: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs unless absolutely necessary.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Clean up area by mopping or with absorbent materials and place in closed container for disposal. Consult Federal, State, and local disposal authorities for approved procedures.

Waste Disposal Methods: Consult local authorities for proper waste disposal procedures. Empty, de-pressurized containers cannot be reused. Cans which are pressurized or contain liquid must be disposed of in a permitted waste management facility. Consult Federal, State and local disposal authorities for approved procedures.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Based on contamination level and working limits of the respirator, use of respirator approved by NIOSH/MSHA.

Eye Protection: Face shield and goggles or chemical goggles should be worn. **Gloves:** Impervious gloves should be worn. Gloves contaminated with product should be discarded. Polyfluorinated polyethylene has been suggested.

Other Clothing and Equipment: Standard work clothing. Standard work shoes; discard if shoes cannot be decontaminated. Store contaminated clothing in well ventilated cabinets or closed containers. Wash contaminated clothing and dry before reuse.

Ventilation: Use adequate level exhaust ventilation. Note: Where carbon monoxide may be generated, special ventilation may be required. Local exhaust recommended when appropriate to control employee exposure.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: When utilizing pressurized containers follow standard safety practices for handling aerosols. Do not puncture or incinerate containers. Do not store at temperatures above 130 F. Odor is not an adequate warning of potentially hazardous concentrations in air. Releases of these gases may cause a flammable atmosphere with explosion potential.

Additional Information: Keep out of the reach of children. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

NFPA

Health Hazard: 1
Fire Hazard.....: 3
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 3
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Penetrating Lubricant

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Penetrating Lubricant
Synonyms: Aerosol Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4085

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# 2-butoxyethanol	111-76-2	<60	25 ppm	25 ppm
Isobutane/propane blend	75-28-5	<5	800 ppm	800 ppm
	74-98-6	<15	1000 ppm	1000 ppm
Aliphatic Petroleum Distillate	64742-96-7	<15	100 ppm	100 ppm
Petroleum Distillate	64742-52-5		5mg/M3	5mg/M3
# Ingredient subject to reporting under Section 313 of Title III (SARA) and CRF 372.				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: 50-60 psig @20°C
Evaporation Rate: (BuAc=1) Faster
Solubility in H₂O: Negligible
Freezing Point °F: N/AV
Boiling Point °F: Propellant -43.7
Specific Gravity H₂O=1 @25° C: 1.08

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): N/AV
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: Pale yellow liquid
Odor: Hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: Propellant <20°F (TCC) **Flammable Limits:** LEL: 1.8 UEL: 25
Extinguishing Media: CO₂, dry chemical, foam.
Special Fire Fighting Procedures: Water may be ineffective. Water may be used to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards: Do not spray near open flame. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Do not store above 120°F.
Incompatibility: Strong oxydizers, aluminum.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES-SKIN-INHALATION & INGESTION: In a confined area, vapors in high concentration are anesthetic. Irritant to eyes, skin and upper respiratory system. Overexposure may result in light-headedness, staggering gait, giddiness and possible nausea. Contains petroleum distillates. Harmful or fatal if swallowed.

B. SUBCHRONIC, CHRONIC, OTHER: Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage, also kidney and liver damage.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient to fresh air.

EYES: Flush with water for at least 15 minutes.

SKIN: Wash with soap and water.

INGESTION: Call a physician immediately. Do NOT induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition. Ventilate, avoid breathing vapors and remove with inert absorbent.

Waste Disposal Methods: Do not incinerate. Recap container and discard in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing vapor or spray mist.

Eye Protection: Safety glasses with sideshield. **Gloves:** Solvent resistant gloves recommended.

Other Clothing and Equipment: None.

Ventilation: Local exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature as exposure to direct sunlight or heat may cause bursting.

Additional Information: Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame. Deliberate concentration and inhalation of vapors may be harmful or fatal.

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Pump Protector

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Pump Protector
Synonyms: Lubricating coating for pumps

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4299

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
propylene glycol	57-55-6	<20	50ppm	NE
isobutane	75-28-5	<5	1000ppm	1000ppm
propane	74-98-6	<5	1000pp,	1000ppm
VOC Content: 24.38% By Weight				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: @20°F: 50-60 psig
Evaporation Rate: (ether=1): <1
Solubility in H₂O: Soluble
Freezing Point °F: N/AV
Boiling Point °F: -43.7 (propellant)
Specific Gravity H₂O=1 @25° C: 0.839

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): 27
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: White foam
Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Propellant < 0°F **Flammable Limits:** LEL: 1.8 UEL: 16
Extinguishing Media: CO₂, foam, dry chemical.
Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus operated under positive pressure.
Unusual Fire and Explosion Hazards: Exposure to direct sunlight or temperatures over 120°F may cause bursting, releasing highly flammable gas.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable, avoid extreme heat.
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation can cause nasal and respiratory irritation, dizziness, unconsciousness and asphyxiation. SKIN: Moderately irritating. EYES: Severe eye irritant, INGESTION: Nausea, vomiting, diarrhea.
B. SUBCHRONIC, CHRONIC, OTHER: Use of solvents has been connected with cardiac abnormalities, liver, kidney and lung damage.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If symptoms persist, get medical attention.

EYES: In case of eye contact, flush with water for at least 15 minutes. If irritation persists, get medical attention.

SKIN: For skin contact, wash thoroughly with soap and water.

INGESTION: Do not induce vomiting. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Eliminate sources of ignition. Ventilate area. Soak up on absorbant material for disposal.

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: With organic vapor canister if ventilation is poor.

Eye Protection: Safety glasses **Gloves:** Solvent resistant

Other Clothing and Equipment: Not normally required.

Ventilation: Local exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F or in direct sunlight. Keep away from children.

Additional Information: Do not puncture or incinerate. Do not spray near fire or open flame.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Spray-n-Bond

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Spray-n-Bond
Synonyms: Insulation Adhesive

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4369

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Acetone	67-64-1		750	1000
Hexane	110-54-3		50	50
Isobutane/Propane Blend	75-28-5		800	800
	74-98-6		1000	1000

No ingredients are on the SARA 313 List
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: psig@70°F (aerosols): max 80
Evaporation Rate: N/E
Solubility in H₂O: Partial
Freezing Point °F: N/E
Boiling Point °F: N/E
Specific Gravity H₂O=1 @25° C: 0.853 (conc. only)

Vapor Density (Air=1) 60-90° F: N/E
VOC Content (% by wt.):
pH @ Solution:
pH as Distributed: N/E
Appearance: Straw colored liquid
Odor: Keytone solvent

IV - FIRE AND EXPLOSION

Flash Point F: Extremely Flammable **Flammable Limits:** N/E
Extinguishing Media: Foam, dry chemical, carbon dioxide, water
Special Fire Fighting Procedures: Self-contained breathing apparatus. Use water fog to cool containers to prevent rupturing & exploding containers. Provide shielding for personnel.
Unusual Fire and Explosion Hazards: Do not expose aerosol to temperatures above 130°F or the containers may rupture.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Open flame, welding arcs, heat, sparks
Incompatibility: strong oxidizing agents
Hazardous Decomposition Products: carbon monoxide, carbon dioxide
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation EYES: May be irritating to eyes SKIN: May be irritating due to defatting of skin INGESTION: Possible chemical pneumonitis if aspirated into lungs

B. SUBCHRONIC, CHRONIC, OTHER: (Excessive exposure to raw materials.) Excessive inhalation of hexane may cause nerve damage

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May aggravate existing eye, skin or upper respiratory conditions

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for 15 minutes. If irritated, seek medical attention.

SKIN: Wash with soap and water. If irritated, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. Do not flush to sewer.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by NIOSH in positive pressure mode

Eye Protection: Safety glasses recommended **Gloves:** Neoprene

Other Clothing and Equipment: None

Ventilation: Adequate ventilation to keep vapor concentration below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not puncture or incinerate containers. Do not store at temperatures above 130oF.

Additional Information: Keep out of the reach of children. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

NFPA

Health Hazard

Fire Hazard

Reactivity

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard

Reactivity

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol V-Belt Dressing

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol V-Belt Dressing
Synonyms: Aerosol Coating

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4086

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
hexane	110-54-3	<80	50 ppm	50 ppm
polybutenes	9003-29-6	<10	N/E	N/E
propane	74-98-6	<10	1000 ppm	1000 ppm
Isobutane	75-28-5		800 ppm	800 ppm

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 50-60 psig @20°C
Evaporation Rate: (BuAc=1) 2.48
Solubility in H₂O: Negligible
Freezing Point °F: N/AV
Boiling Point °F: N/AV
Specific Gravity H₂O=1 @25° C: 0.675

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): 96
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: l: clear, colorless liquid
Odor: Characteristic chlorinated hydrocarbon

IV - FIRE AND EXPLOSION

Flash Point F: Propellant <20°F **Flammable Limits:** LEL: for propellant is 1.8
Extinguishing Media: CO₂, dry chemical, foam.
Special Fire Fighting Procedures: Water may be ineffective. Water may be used to keep fire exposed containers cool. Use equipment or shielding to protect personnel against bursting or rupturing cans.
Unusual Fire and Explosion Hazards: Do not spray near open flame. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Do not store above 120°F.
Incompatibility: None
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, hydrogen chloride and phosgene gas.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness. EYES: Mild irritation. SKIN: Possible mild irritation due to defatting of skin. INGESTION: Possible chemical pneumonitis if aspirated into lungs. Nausea.

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of the mixtures)
May cause elevated carboxyhemoglobin levels, nausea, dizziness and irritation.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient to fresh air. Resuscitate if necessary. Get medical attention.

EYES: Flush with water for at least 15 minutes. If irritated, seek medical attention.

SKIN: Possible mild irritation due to defatting of skin.

INGESTION: Do NOT induce vomiting. Drink two large glasses of water. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by U. S. Bureau of Mines for organic vapor.

Eye Protection: Safety glasses **Gloves:** Neoprene gloves recommended

Other Clothing and Equipment: None.

Ventilation: Adequate ventilation to keep vapor concentration below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not puncture or incinerate containers. Do not store at temperatures above 130 ° F.

Additional Information: Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame. Deliberate concentration and inhalation of vapors may be harmful or fatal.

NFPA

Health Hazard: 2

Fire Hazard.....: 4

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 4

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Aerosol Zinc Rich Cold Galv

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Aerosol Zinc Rich Cold Galv
Synonyms: Aerosol Zinc Coating

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4087

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Rule VMP Naphtha (LEL: 0.9)	64742-89-8	<5	300ppm	500ppm
# Xylene (LEL: 1.1)	1330-20-7	<15	100ppm	100ppm
# Methyl Ethyl Ketone (LEL: 1.0)	78-93-3	<40	200ppm	200ppm
Propane (LEL: 2.3)	74-98-6	15	1000ppm	1000ppm
# Metallic Zinc Dust	7440-66-6	<45	NE	NE

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372. Aerosol - Contents under pressure 55 +/- 5 psig

VOC Content: 4.46 lbs/gal
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/AV
Evaporation Rate: (ether=1) <1
Solubility in H₂O: N/AV
Freezing Point °F: N/AV
Boiling Point °F: Propellant <0
Specific Gravity H₂O=1 @25° C: N/A

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): 55
pH @ Solution: N/AV
pH as Distributed: N/AV
Appearance: Propellants
Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Propellant <20°F **Flammable Limits:** See Sect. II
Extinguishing Media: Carbon dioxide, dry chemical or foam.
Special Fire Fighting Procedures: Water may be ineffective. Water may be used to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards: Do not spray near open flame. Keep at room temperature as exposure to direct sunlight or other heat may cause bursting.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable. Do not store above 120°F.
Incompatibility: None.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide released by open flame.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES-SKIN-INHALATION & INGESTION: In a confined area, vapors in high concentration are anesthetic. Irritant to skin and upper respiratory system. Overexposure may result in light-headedness, staggering gait, giddiness and possible nausea. Harmful or fatal if swallowed.

B. SUBCHRONIC, CHRONIC, OTHER: Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage, also kidney and liver damage. This product is not considered to be a carcinogen by NTP, IARC or OSHA.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient to fresh air.

EYES: Flush with water for at least 15 minutes.

SKIN: Wash with soap and water.

INGESTION: Call a physician immediately. Do NOT induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition. Ventilate, avoid breathing vapors and remove with inert absorbent.

Waste Disposal Methods: Do not incinerate. Dispose of in accordance with federal, state and local regulations regarding pollution.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing vapors or spray mists.

Eye Protection: Safety glasses with sideshields. **Gloves:** Gloves recommended.

Other Clothing and Equipment: None required.

Ventilation: Local exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 120°F. Keep at room temperature as exposure to direct sunlight or heat may cause bursting.

Additional Information: Keep away from children. Do not puncture or incinerate. Do not spray near fire or open flame.

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Alka-Brite

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Alka-Brite
Synonyms: Coil Brightener and Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4120

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide ORAL LD50 140 mg/kg All ingredients are TSCA listed.	1310-73-2	<10	2mg/m3 (ceiling)	2mg/m3 (ceiling)

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like Water
Evaporation Rate: (ether=1) N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/AV
Boiling Point °F: >212°F
Specific Gravity H₂O=1 @25° C: 1.12

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): N/A
pH @ undiluted Solution: >13
pH as Distributed: N/A
Appearance: Pink liquid
Odor: Slight odor

IV - FIRE AND EXPLOSION

Flash Point F: Non Flammable. **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None Known.
Incompatibility: Acids and strong oxidizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): CORROSIVE TO ALL BODY TISSUE. EYES & SKIN: Causes severe and painful injury. INHALATION: Mists will cause irritation and may damage respiratory tract. INGESTION: Harmful if swallowed. Will upset stomach; may cause nausea, headaches and dizziness.
B. SUBCHRONIC, CHRONIC, OTHER: No available information found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposure of mists. Get medical attention.

EYES: &

SKIN: In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Thoroughly clean shoes before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable absorbing material and place in sealed container.

Waste Disposal Methods: Neutralize with 6M-HCL. Flush with plenty of water and dispose of in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH-approved respirator is recommended if the OSHA air limit for Sodium Hydroxide is exceeded.

Eye Protection: Eye goggles or full face shield. **Gloves:** Rubber.

Other Clothing and Equipment: Protective clothing.

Ventilation: Local and mechanical exhaust.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or on clothing. Avoid breathing mists. Keep container closed. Wash thoroughly after handling.

Additional Information: Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Alka-Brite - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Alka-Brite - Canada
Synonyms: Coil Brightener and Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4819

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide ORAL LD50 140 mg/kg All ingredients are TSCA listed.	1310-73-2	<10	2mg/m3 (ceiling)	2mg/m3 (ceiling)

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like Water
Evaporation Rate: (ether=1) N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/AV
Boiling Point °F: >212°F
Specific Gravity H₂O=1 @25° C: 1.12

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): N/A
pH @ undiluted Solution: >13
pH as Distributed: N/A
Appearance: Pink liquid
Odor: Slight odor

IV - FIRE AND EXPLOSION

Flash Point F: Non Flammable. **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None Known.
Incompatibility: Acids and strong oxidizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): CORROSIVE TO ALL BODY TISSUE. EYES & SKIN: Causes severe and painful injury. INHALATION: Mists will cause irritation and may damage respiratory tract. INGESTION: Harmful if swallowed. Will upset stomach; may cause nausea, headaches and dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: No available information found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposure of mists. Get medical attention.

EYES: &

SKIN: In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Thoroughly clean shoes before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable absorbing material and place in sealed container.

Waste Disposal Methods: Neutralize with 6M-HCL. Flush with plenty of water and dispose of in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH-approved respirator is recommended if the OSHA air limit for Sodium Hydroxide is exceeded.

Eye Protection: Eye goggles or full face shield. **Gloves:** Rubber.

Other Clothing and Equipment: Protective clothing.

Ventilation: Local and mechanical exhaust.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or on clothing. Avoid breathing mists. Keep container closed. Wash thoroughly after handling.

Additional Information: Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

Alka-brite plus

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Alka-brite plus

Product Number: 4120

Synonyms: Alkaline Coil Cleaner

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Sodium Hydroxide (Caustic Soda)	1310-73-2	>20	2mg/M3 Ceiling	

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Not Determined

Vapor Density (Air=1) 60-90° F:
Unknown

Evaporation Rate: (ether=1) Same as H

VOC Content (% by wt.): 0%

2

pH @ 10% Solution: 13.2

0

pH as Distributed: 14.0

Solubility in H₂O: Complete

Appearance: Clear, Colored Liquid

Freezing Point °F: N/A

Odor: No Distinct Odor

Boiling Point °F: 212°F

Specific Gravity H₂O=1 @25° C: 1.252 +/-

0.005

IV - FIRE AND EXPLOSION

Flash Point F: None to Boiling **Flammable Limits:** N/A

Extinguishing Media: Water spray (Fog); Dry chemical; CO

2

; Foam

Special Fire Fighting Procedures: Do not enter confined fire-spaces without protective clothing and self-contained air supply.

Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable

Incompatibility: Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach)

Hazardous Decomposition Products: Burning may produce carbon monoxide and/or carbon dioxide.

Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) EYE, SKIN, ORAL: Corrosive material. Will cause burns of skin and eyes with prolonged contact. Eye damage likely if contact is prolonged. Generated mists may be seriously irritating and cause damage to respiratory tract if swallowed. Harmful or fatal if swallowed. May cause severe burns of mucous membranes, stomach, nausea, vomiting - possible internal damage.

B. SUBCHRONIC, CHRONIC, OTHER: Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: &

SKIN: Flush eyes with water for at least 15 minutes and call a physician immediately. Skin: Wash affected area with large amounts of soap and water. If irritation persists call physician.

INGESTION: Do not induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by diking with soil or other inert material and CAREFULLY neutralize with dilute acid. Mop, pump or absorb with inert material and reclaim into sound containers for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. Keep non-neutralized material out of sewers, storm drains, surface water and soil.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH approved respirator where mists or sprays may be generated. (Caustic mist cartridge type)

Eye Protection: Chemical goggles, face shield **Glove:** Rubber Gloves

Other Clothing and Equipment: Protective clothing to minimize contact (boots, apron, faceshield)

Ventilation: Product is intended for outdoor use.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Corrosive Material - Handle All Containers Carefully. Wash thoroughly after handling. Keep containers closed when not in use. Avoid contact with leather or wool.

Additional Information: None

NFPA

Health Hazard.....: 3

Fire Hazard.....: 0

Reactivity.....: 0

Specific Hazard...:

HMIS RATING

Health Hazard.....: 3

Fire Hazard.....: 0

Reactivity.....: 0

Personal Protection...: X (Sec. 9)

Revision Date: 06/21/2006

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Material Safety Data Sheet Bio-Fresh

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Bio-Fresh
Synonyms: Germicide Cleaner
EPA Regis. No. 1459-101-65516
EPA Est. No. 10208-MO-1

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4126

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Dipropylene Glycol Monomethyl Ether	34590-94-8	<10	100ppm	150ppm
Alkyl Dimethyl Benzyl Ammonium Chloride	139-07-1	0.3	N/E	N/E

Bio-Fresh contains no Section 313 listed substances subject to reporting
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Not Determined
Evaporation Rate: Same as water
Solubility in H₂O: Complete
Freezing Point °F: 32°F
Boiling Point °F: 212°F
Specific Gravity H₂O=1 @25° C: 1.010

Vapor Density (Air=1) 60-90° F: Not Determined
VOC Content (% by wt.): Not Determined
pH @ Solution: N/A
pH as Distributed: 12.0 +/- 0.5
Appearance: Clear, water white
Odor: Characteristic chemical

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A N/A
Extinguishing Media: Product is not combustible. Water spray, dry chemical, CO₂
Special Fire Fighting Procedures: Do not enter confined fire-spaces without protective clothing & self-contained air supply
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable.
Incompatibility: Strong acids/oxidizers; do not mix with chlorinated cleaners (bleach).
Hazardous Decomposition Products: Burning may produce CO, CO₂ and unidentified organic compounds.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES; Prolonged or repeated contact of concentrated product will cause irritation and reddening. SKIN: May cause irritation with some individuals. INGESTION: May cause nausea, abdominal discomfort and diarrhea.
B. SUBCHRONIC, CHRONIC, OTHER: None.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: Flush eyes with water for at least 15 minutes and call a physician immediately.

SKIN: Wash affected areas with large amounts of soap and water. If irritation persists, call a physician.

INGESTION: DO NOT induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by dyking with soil or other inert material. Mop, pump or absorb with material and reclaim into sound containers for reuse, recycle or proper disposal. Prevent all spills from entering natural water ways.

Waste Disposal Methods: Dispose of in an approved waste facility according to federal, state and local regulations. See label for specifics.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required under normal use conditions. Avoid misting conditions/spray back.

Eye Protection: Safety glasses goggles. **Gloves:** Rubber gloves /PVC.

Other Clothing and Equipment: Protective clothing as required to minimize contact during specific operations.

Ventilation: Mechanical.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: No special requirements if product is handled according to good practices. Keep container closed when not in use. Wash thoroughly after handling. Avoid all contact with eyes, skin or clothing. Avoid all contact with foods, feed or water. Observe all label directions as to storage and disposal. Keep out of reach of children.

Additional Information: None

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Bio-Fresh cd

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Bio-Fresh cd
Synonyms: Bacteristat-Fungistat
EPA Registration No. 9804-3-65516
EPA Establishment No. 9804-OK-1

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4126-34

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Chlorite	7758--19-2	min 0.17	N/E	N/E
Chlorine Dioxide*	10049-04-4	Trace	0.1 ppm	0.1 ppm
* SARA 313				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 23.7 mm Hg (@25°C)
Evaporation Rate: Comparable to water
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 213°F
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: .02 Kg/m³
VOC Content (% by wt.): <0.01%
pH @ N/A Solution: N/A
pH as Distributed: 7.5-9.0
Appearance: Clear liquid
Odor: Faint chlorinous odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling point **Flammable Limits:** N/A
Extinguishing Media: Water unless contraindicated by other material involved in fire
Special Fire Fighting Procedures: Do not allow product solutions to evaporate to dryness.
Unusual Fire and Explosion Hazards: The sodium chlorite in dried Bio-fresh cd is a strong oxidizer, which supports combustion.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable - Avoid storing product under conditions in which it could evaporate to crystalline salt.
Incompatibility: Avoid accidental contact with acids, chlorine compounds, hypochlorites (bleach), sulfur and silfite compounds, phosphorous, organic solvents and combustible/flammable materials.
Hazardous Decomposition Products: Exposure to acids or chlorine compounds can produce chlorine dioxide gas.
Conditions Contributing to Hazardous Polymerizations: Does not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Rat oral LD50=4360 mg/Kg. May produce gastric discomfort, nausea vomiting and diarrhea. Ingestion of large quantities may produce methemoglobinemia. EYES: Based upon rabbit studies, product has an EPA Category III rating as a mild irritant. Exposure can produce slight irritation of conjunctiva, cornea and eyelid. SKIN: Based upon rabbit studies, product is listed as 'practically not an irritant'. Prolonged exposure may produce localized irritation, contact dermatitis, mild erythema and edema. Skin absorption is highly unlikely in toxic amounts (Rabbit Acute Dermal LD50>2020 mg/Kg.). INHALATION: Acute Inhalation: LC50> 5.61 mg/L. Prolonged inhalation of fog or mist containing product may be irritating to nose and throat.

B. SUBCHRONIC, CHRONIC, OTHER: May cause localized irritation to areas exposed to product. Over exposure to chlorine dioxide from activation can produce coughing, sore throat, headache and dizziness.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Skin disorder, such as dermal allergies and dermatitis.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Unactivated product normally has no respiratory effects. If exposure to chlorine dioxide produced from activation occurs, remove victim to fresh air. Contact a physician if respiratory distress continues.

EYES: Flush eyes thoroughly with water, making certain eyelids are held open. If irritation or burning persist, seek medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and rinse thoroughly with water before laundering, or discard. If irritation occurs, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Poison Control Center immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills, involving less than 10 gallons, may be flushed to a designated and permitted sewer system with copious amounts of water. Do not discharge this product to storm drains or to any surface or groundwater source unless specifically allowed under a valid NPDES permit.

Waste Disposal Methods: Small quantities, less than 10 gallons, may be flushed to an authorized and permitted sewer with copious amounts of water. Large quantities should be taken to an authorized disposal site.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: In accordance with OSHA regulations (29 CFR 1910.143 & 29 CFR 1910.1000), fogging or spraying applications may require worker respiratory protection such as NIOSH approved air-purifying respirators.

Eye Protection: Chemical safety goggles. **Gloves:** Chemically impervious gloves.

Other Clothing and Equipment: Follow label instructions.

Ventilation: Open air or good room ventilation is normally adequate for safe use of the product.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool, dry, well-ventilated location away from acids, chlorine compounds (bleach), oxidizers and direct sunlight. Keep containers tightly closed when not in use and open carefully to prevent spillage.

Additional Information: None

NFPA

Health Hazard: 1
Fire Hazard.....: 0
Reactivity: 1
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 0
Reactivity.....: 1
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Burst-Kontr'I AP

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Burst-Kontr'I AP
Synonyms: Propylene Glycol Heat Transfer Fluid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4187

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Propylene Glycol	57-55-6	40 - 50%		
Dibasic Acid	72162-23-3	<1%		
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 0.1
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: -10°F
Boiling Point °F: 360°F
Specific Gravity H₂O=1 @25° C: 1.04

Vapor Density (Air=1) 60-90° F: 2.6
VOC Content (% by wt.): slightly volatile
pH @ Solution: N/A
pH as Distributed:
Appearance: Light blue liquid slightly vis.
Odor: Near odorless

IV - FIRE AND EXPLOSION

Flash Point F: 211°F **Flammable Limits:** (%vol. in air) -17.4
Extinguishing Media: CO₂ Dry chemical, Alcohol type foam
Special Fire Fighting Procedures: Do not enter fire area without proper protection. See "decomposition products possible." Fight fire from safe distance/protected location. Heat may build pressure/rupture closed containers. Spreading fire. Increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/steam explosion. Burning liquid may float on water. Although soluble, may not be practical to extinguish fire by water dilution. Notify authorities if liquid enters sewer/public water.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; avoid high temperatures and severe oxidizing conditions
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Incomplete combustion may produce carbon monoxide and other harmful gases/vapors.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): Slight eye irritant. No inhalation hazard identified from data. No skin absorption hazard identified from data. No skin irritation identified from data. No ingestion hazard identified from data.
B. SUBCHRONIC, CHRONIC, OTHER: No chronic health effects are expected from normal use.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: N/A

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush with water for 20-30 minutes, Retract eyelids open. Obtain medical attention if pain, blinking, tears or redness persist.

SKIN: Not expected to present a significant skin hazard under anticipated conditions of normal use.

INGESTION: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Evacuate/limit access. Prevent flow to sewers/public water. Stop release. Notify fire/environmental authorities. Restrict water use for cleanup. Slippery walking. Spread granular cover. Soak up small spill with inert solids. Use suitable disposal containers on water material soluble/may float or sink. May be biodegrade. Contain/minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

Waste Disposal Methods: Landfill solids at permitted sites. Use registered transporters. Burn concentrated liquids. Diluting with clean, low viscosity fuel. Avoid flameouts. Assure emissions comply with applicable regulations. Avoid overloading/poisoning plant biomass. Assure effluent complies with applicable regulations. Contaminated product, soil or water should not be designated RCRA Hazardous waste.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None when used with adequate ventilation.

Eye Protection: Safety glasses **Gloves:** Recommended

Other Clothing and Equipment: None required.

Ventilation: Use with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Hygroscopic, use dry nitrogen or low dew point air for tank padding. Keep drums tightly closed to prevent contamination. Store at 65-90°F.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

C-3 Refrigeration Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: C-3 Refrigeration Oil
Synonyms: Refined and Treated Naphthenic Oils

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4303

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Mineral Oil	64742-44-5	100	5mg/m3 (as a mist)	N/A

Refined and Treated Naphthenic
Oils - 100%

VOC Content: 9.6%, 0.72 lbs/gal (0.086mg/L)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: <0.0001
Evaporation Rate: (ether=1): N/AV
Solubility in H₂O: Nil
Freezing Point °F: N/AV
Boiling Point °F: >212°F
Specific Gravity H₂O=1 @25° C: 0.92

Vapor Density (Air=1) 60-90° F: 10
VOC Content (% by wt.): 100
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Colorless liquid
Odor: Little odor

IV - FIRE AND EXPLOSION

Flash Point F: 330°F **COC Flammable Limits:** N/A
Extinguishing Media: Water fog, chemical foam, dry chemical CO₂.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong Oxidizers.
Hazardous Decomposition Products: Exposure to high temperature can produce carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause reversible eye and skin irritation.
INGESTION: This product is practically non-toxic. The acute ORAL LD50 (rats) is >15g/kg.
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

SKIN: N/A

INGESTION: N/A. Good First Aid should be followed in all cases of exposure.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dispose of in accordance with federal, state and local regulations. Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed metal container for disposal.

Waste Disposal Methods: Mix with a flammable solvent and incinerate in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses **Gloves:** Not required

Other Clothing and Equipment: Not required.

Ventilation: Local exhaust.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed.

Exercise caution in the storage and handling of all chemical substances.

Additional Information: This product is severely hydrotreated, and severely hydrotreated naphthenic petroleum oil has not been found to be carcinogenic nor a potential carcinogen. This product is not listed as a carcinogen or a potential carcinogen by the National Toxicology Program, by the IARC monographs or by OSHA.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

C-4 Refrigeration Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: C-4 Refrigeration Oil
Synonyms: Refined Hydrotreated Naphthenic Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4304

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Mineral Oils	64742-44-5	100	5mg/m3 (as a mist)	N/A

VOC Content: 9.3%; 0.70 lbs/gal (0.084 mg/L)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg:<0.0001 @ 20°C
Evaporation Rate: (ether=1): 1000x slower vs eth
Solubility in H₂O: Nil
Freezing Point °F: N/AV
Boiling Point °F: > 500°F (IBP)
Specific Gravity H₂O=1 @25° C: 0.9

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): nil
pH @ N/A Solution: N/A
pH as Distributed: essentially neutral
Appearance: Water white to straw colored liquid
Odor: Little odor

IV - FIRE AND EXPLOSION

Flash Point F: >350°F **COC Flammable Limits:** N/A
Extinguishing Media: Water fog, chemical foam, dry chemical CO₂.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: None known
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Exposure to high temperature can produce carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause reversible eye and skin irritation.
INGESTION: This product is practically non-toxic through ingestion. The acute ORAL LD50 (rats) is >30g/kg.
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: N/A
INGESTION: N/A. Good First Aid should be followed in all cases of exposure.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dispose of in accordance with federal, state and local regulations. Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed metal container for disposal.

Waste Disposal Methods: Mix with a flammable solvent and incinerate in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses **Gloves:** Not required

Other Clothing and Equipment: Not required

Ventilation: Local exhaust.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe any label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

C-5 Refrigeration Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: C-5 Refrigeration Oil
Synonyms: Refined Naphthenic Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4305

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Mineral Oil	64742-44-5	100	5mg/m3 (as a mist)	N/A

VOC Content: 2.0%; 0.15 lbs/gal (0.018 mg/L)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: <0.0001
Evaporation Rate: (ether=1): N/AV
Solubility in H₂O: Nil
Freezing Point °F: N/AV
Boiling Point °F: 212°F
Specific Gravity H₂O=1 @25° C: 0.93

Vapor Density (Air=1) 60-90° F: 20
VOC Content (% by wt.): 100
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Colorless liquid
Odor: Little odor

IV - FIRE AND EXPLOSION

Flash Point F: 340°F **COC Flammable Limits:** N/A
Extinguishing Media: Water fog, chemical foam, dry chemical CO₂.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: None known
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Exposure to high temperature can produce carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause reversible eye and skin irritation.
INGESTION: This product is practically non-toxic through ingestion. The acute ORAL LD50 (rats) is >30g/kg.
B. SUBCHRONIC, CHRONIC, OTHER: None known
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: N/A
INGESTION: N/A. Good First Aid should be followed in all cases of exposure.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dispose of in accordance with federal, state and local regulations. Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing with vermiculite or other suitable material and place in sealed metal container for disposal.

Waste Disposal Methods: Mix with a flammable solvent and incinerate in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses **Gloves:** Not required

Other Clothing and Equipment: Not required

Ventilation: Local exhaust

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe any label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Cal-Blue

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cal-Blue
Synonyms: Bubble-forming Liquid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4182

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Ethylene glycol (ORAL LD50 8.5mg/kg rat)	107-21-1	<40	50ppm ceiling (vapor)	NE

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.
VOC Content: none
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Unknown	Vapor Density (Air=1) 60-90° F: Unknown
Evaporation Rate: Unknown	VOC Content (% by wt.): Approx 85
Solubility in H₂O: Complete	pH @ Solution: N/A
Freezing Point °F: 5°F	pH as Distributed: 7.3-7.6
Boiling Point °F: >212°F	Appearance: Clear blue liquid
Specific Gravity H₂O=1 @25° C: 1.085	Odor: Mild Chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** Unknown
Extinguishing Media: Product is not combustible. In case of fire use CO₂, foam or dry chemical.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical dry fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None known

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat and open flame
Incompatibility: Can react violently with strong oxidizers, dehydrating agents such as sulfuric acid, acetic anhydride.
Hazardous Decomposition Products: Carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: None known

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: May cause eye irritation. (Primary Route of Exposure) SKIN: Essentially non-irritating. INGESTION: Harmful if swallowed. May cause nausea, dizziness, central nervous system damage, kidney disorders. INHALATION: Prolonged or repeated breathing of vapors may cause headache, nausea, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: Repeated or prolonged inhalation of vapors may cause nervous system damage. Repeated contact with skin may cause sensitization in some individuals. Ethylene glycol has caused birth defects in laboratory animals.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Preexisting kidney disorders, lung disorders

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air

EYES: Flush with plenty of water for at least 15 minutes. If irritation persists, call a physician.

SKIN: Wash area with soap and plenty of water.

INGESTION: If swallowed, call a physician immediately. Give one or two glasses of water and induce vomiting by sticking finger down throat. Never give anything by mouth or attempt to induce vomiting in an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush spill with water or wipe up and incinerate.

Waste Disposal Methods: Incinerate or flush to drain served by sanitary sewer in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required

Eye Protection: Avoid eye contact **Gloves:** None required

Other Clothing and Equipment: None required

Ventilation: Vapors are minimal at room temperatures. Normal room ventilation should be sufficient.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Avoid breathing mists or vapors. Wash thoroughly after handling.

Additional Information: Keep out of reach of children. Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Cal-Blue LT

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cal-Blue LT
Synonyms: Low Temp Gas Leak Detector

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4183

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Ethylene glycol (ORAL LD50 8.5mg/kg rat)		30-50	50ppm ceiling (vapor)	N/E
# Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: Similar to water
Solubility in H₂O: Complete
Freezing Point °F: -20°F
Boiling Point °F: 212°F
Specific Gravity H₂O=1 @25° C:

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 7.0-8.0
Appearance: Clear, blue viscous liquid
Odor: Mild

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Product is not combustible. In case of fire use CO₂, foam or dry chemical.
Special Fire Fighting Procedures: Do not enter confined air spaces without protective clothing and self-contained air supply
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Can react violently with strong oxidizers, dehydrating agents such as sulfuric acid, acetic anhydride.
Hazardous Decomposition Products: Burning can produce oxides of carbon.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: May cause eye irritation. (Primary Route of Exposure) SKIN: May cause irritation, reddening, drying or cracking of skin. INGESTION: Ethylene glycol in product is toxic. Harmful if swallowed. May cause nausea, dizziness, central nervous system damage, cardiopulmonary effects and possible kidney damage, coma and convulsions. INHALATION: Prolonged or repeated breathing of vapors may cause headache, nausea, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: Ethylene glycol has caused birth defects in laboratory animals.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Preexisting kidney disorders, lung disorders

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: Flush with plenty of water for at least 15 minutes and call a physician.

SKIN: Wash area with soap and plenty of water. If irritation develops, call a physician.

INGESTION: If swallowed, call a physician immediately. Give one or two glasses of water and induce vomiting by sticking finger down throat. Never give anything by mouth or attempt to induce vomiting in an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by dyking with soil or other inert material and reclaim into sound container for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required under normal use conditions. Use with adequate ventilation.

Eye Protection: Safety glasses or goggles **Gloves:** Not required

Other Clothing and Equipment: Not required under normal use conditions.

Ventilation: Mechanical

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep container closed when not in use (turn spray nozzle to "off " position). Avoid contact with eyes, skin and clothing. Avoid breathing mists or vapors. Wash thoroughly after handling.

Additional Information: Keep out of reach of children. Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Cal-Brite

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cal-Brite
Synonyms: Coil cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4133

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Ammonium Bifluoride	1341-49-7	2-20 %	2.5mg/m*	2.5mg/m*
Glycolic Acid	79-14-1	2-15 %	N/A	N/A
C11 alcohol ethoxylate	68439-46-3	2-10 %	N/A	N/A

*mg/cubic meter

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility in H₂O: Complete
Freezing Point °F: 32°
Boiling Point °F: 212°
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 4-5
Appearance: Clear liquid
Odor: Alcohol

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** Non-flammable
Extinguishing Media: Use media appropriate for surrounding material
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable at normal temperatures and storage conditions
Incompatibility: None
Hazardous Decomposition Products: Decomposition will not occur
Conditions Contributing to Hazardous Polymerizations: Polymerization will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): SKIN: May cause skin irritation with discomfort or rash or skin burns or ulceration. EYES: May cause eye irritation with discomfort, tearing, or blurring of vision; or eye corrosion with cornea or conjunctival ulceration. INHALATION: May cause irritation of the upper respiratory passages with coughing and discomfort; or temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness. Inhalation of ammonium bifluoride may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Chronic exposure to fluoride may cause fluorosis with weight loss, anemia, weakness, general ill health, stiffness of joints. INGESTION: May cause upper gastrointestinal irritation or corrosion of mucous membranes with stomach discomfort, nausea and prostration or abnormal liver function as detected by laboratory tests. Fatality may occur from gross overexposure.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.

INGESTION: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician. Notes to Physicians: Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 ml water and mix well. Administer 5 ml/kg, or 350 ml for an average adult.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safeguards (Personnel) NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONNEL PROTECTIVE EQUIPMENT during clean-up. Spill Clean Up: Soak up with dry or other absorbent material.

Waste Disposal Methods: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Providence, and Local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA approved protection, as appropriate.

Eye Protection: Goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Wear appropriate, impervious clothing to prevent contact (gloves, apron, pants, jacket, hood, boots) or full acid suit with hood, boots and gloves. (Neoprene gloves suggested).

Ventilation: Use only with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.

Additional Information: Keep container tightly closed.

NFPA

Health Hazard: 1
Fire Hazard.....: 0
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 0
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Calci-Solve

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Calci-Solve
Synonyms: Acid-based pipe and drain cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4134

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Hydrochloric Acid**	7647-01-0	>30	5ppm*	N/A
Water	7732-18-5	<70		
Acid Inhibitor (proprietary)		<1		

*Ceiling

**Reportable for SARA Title III, S.313 (Form R)

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 39 mm (Hg)

Evaporation Rate: N/A

Solubility in H₂O: Complete

Freezing Point °F: N/A

Boiling Point °F: Est. 180°F

Specific Gravity H₂O=1 @25° C: 1.16

Vapor Density (Air=1) 60-90° F: N/A

VOC Content (% by wt.): N/A

pH @ Solution: N/A

pH as Distributed: <1

Appearance: Red liquid

Odor: Muriatic acid.

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** Non flammable

Extinguishing Media: Product is not flammable

Special Fire Fighting Procedures: Avoid skin and eye contact, and breathing of acid vapors. Wear head and body protection and HCl respirator if exposure to liquid is likely

Unusual Fire and Explosion Hazards: NOTE: This product can react with metals to release hydrogen gas. Firemen may need to protect against this.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable

Incompatibility: Strong alkalis, materials not resistant to strong acids, active metals (zinc, aluminum, magnesium, etc.).

Hazardous Decomposition Products: Hydrogen chloride vapors. Contact with active metals can release flammable gas.

Conditions Contributing to Hazardous Polymerizations: Does not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Corrosive. Causes eye damage. SKIN: Corrosive to tissues. Causes irritation and burns. INGESTION: Harmful if swallowed. Burns to mouth, throat, esophagus and stomach are likely. INHALATION: Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mists or liquid may cause coughing and burning.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Over exposure to product has the following effects: inhalation of vapors may cause pulmonary edema, collapse of circulatory system and damage to the upper respiratory system and collapse. Inhalation may cause coughing, throat burning, choking, bronchitis, and difficult breathing. Ingestion is harmful and may be fatal. Ingestion may cause burns.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give artificial respiration or oxygen if needed, and contact a physician.

EYES: Wear splash-proof goggles. Provide convenient eyewash stations. Flush immediately for 15 minutes. Get immediate medical attention.

SKIN: In case of contact, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation persists, get medical attention. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water or milk. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills can be flushed into normal drainage or into ground with copious amounts of water, or taken up with absorbent material. For large spills, dike area and contain as much spilled material as possible, absorbing with soda ash or sodium bicarbonate. Flush with water or absorb for collection and proper disposal. Personnel should use skin, eye and respiratory protection

Waste Disposal Methods: If neutralized, may be disposed in sewers if local regulations permit. Otherwise, send to licensed treatment and disposal facility. As supplied, this product is a RCRA hazardous waste.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Wear approved HCl vapor/mist respirator if exposure is likely

Eye Protection: Full face shield or goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Wear acid-resistant protective gloves, boots and clothing. Provide convenient safety showers. Provide convenient eye wash stations.

Ventilation: Use with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Wash thoroughly after handling. Keep from contact with chlorine bleaches. Check containers daily for leaks. Have water hoses and alkaline material (soda ash) convenient. Only use containers and equipment designed for acid service.

Additional Information: Areas of use and storage should be ventilated adequately to reduce vapors below odor level. Empty containers should be rinsed well before handling and disposal.

NFPA

Health Hazard 3
Fire Hazard..... 0
Reactivity 0
Specific Hazard

HMIS RATING

Health Hazard..... : 3
Fire Hazard : 0
Reactivity..... : 0
Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

CalClean

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: CalClean

Product Number: 4135

Synonyms: Detergent coil cleaner

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Sodium Metasilicate	6834-92-0	<5	N/A	N/A

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: like water
Evaporation Rate: (ether=1) N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/AV.
Boiling Point °F: >212°F
Specific Gravity H₂O=1 @25° C: 1.085

Vapor Density (Air=1) 60-90° F: Like H
2
O.
VOC Content (% by wt.): 0%
pH @ undiluted Solution: 13.1
pH as Distributed: N/A
Appearance: Fluorescent green
Odor: Lightly perfumed

IV - FIRE AND EXPLOSION

Flash Point F: Nonflammable **Flammable Limits:** Not Applicable
Extinguishing Media: Product is nonflammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong acids.
Hazardous Decomposition Products: Unknown.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) EYES: May cause severe irritation and pain with redness and swelling of conjunctiva. May injure eye tissue if not promptly removed. SKIN: May be irritating to skin and prolonged contact may cause dermatitis. INGESTION: May cause moderate to severe irritation of mouth, throat and stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If mists of product are inhaled, remove to fresh air. If irritation develops or persists, call a physician.

EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

INGESTION: Drink plenty of water and call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed container for disposal.

Waste Disposal Methods: Flush with plenty of water. Dispose of in accordance with local, state and federal regulations

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Eye goggles or safety glasses **Glove:** Rubber Gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Additional Information: Read and observe all label precautions.

NFPA**Health Hazard.....: 1****Fire Hazard.....: 0****Reactivity.....: 0****Specific Hazard....:****HMIS RATING****Health Hazard.....: 1****Fire Hazard.....: 0****Reactivity.....: 0****Personal Protection....: X (Sec. 9)****Revision Date: 06/21/2006**

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Material Safety Data Sheet CalClean - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: CalClean - Canada
Synonyms: Detergent coil cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4821

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	<5	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: like water
Evaporation Rate: (ether=1) N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/AV.
Boiling Point °F: >212°
Specific Gravity H₂O=1 @25° C: 1.085

Vapor Density (Air=1) 60-90° F: Like H₂O.
VOC Content (% by wt.): N/A
pH @ undiluted Solution: 13.1
pH as Distributed: N/A
Appearance: Fluorescent green
Odor: Lightly perfumed

IV - FIRE AND EXPLOSION

Flash Point F: Not Flammable **Flammable Limits:** Not Applicable
Extinguishing Media: Product is not flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong acids.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: May cause severe irritation and pain with redness and swelling of conjunctiva. May injure eye tissue if not promptly removed. SKIN: May be irritating to skin and prolonged contact may cause dermatitis. INGESTION: May cause moderate to severe irritation of mouth, throat and stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If mists of product are inhaled, remove to fresh air. If irritation develops or persists, call a physician.

EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

INGESTION: Drink plenty of water and call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed container for disposal.

Waste Disposal Methods: Flush with plenty of water. Dispose of in accordance with local, state and federal regulations

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Eye goggles or safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet CalClean HD-Rtu

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: CalClean HD-Rtu
Synonyms: Ready-to-use Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4144

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	<1	N/A	N/A
Potassium Hydroxide	1310-58-3	<1	2mg/m3 (ceiling)	2mg/m3 (ceiling)

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg) Like Water
Evaporation Rate: N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 212°F
Specific Gravity H₂O=1 @25° C: 1.011

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ 1% Solution: 12.0
pH as Distributed: 13.0
Appearance: Fluorescent green liquid
Odor: Very Lightly perfumed

IV - FIRE AND EXPLOSION

Flash Point F: Not Flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable. Use water to cool source of fire.
Special Fire Fighting Procedures: For any chemical fire, use self-contained breathing apparatus and impervious clothing.
Unusual Fire and Explosion Hazards: None Known

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable in normal use.
Incompatibility: Strong acids and oxidizers.
Hazardous Decomposition Products: None Known
Conditions Contributing to Hazardous Polymerizations: None Known

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Concentrate will burn and irritate both eyes and skin.
INGESTION: Concentrate may burn or severely irritate mouth, esophagus and stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: No available information was found.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call physician.
INGESTION: Drink plenty of water. Do NOT induce vomiting. Contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in a sealed metal container for disposal.

Waste Disposal Methods: Flush with plenty of water. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Goggles or safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet CalClean, Special HD

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: CalClean, Special HD
Synonyms: Detergent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4143

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	5	N/A	N/A
Potassium Hydroxide	1310-58-3	3	2mg/m3 (ceiling)	2mg/m3 (ceiling)

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like Water
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: > 212°
Specific Gravity H₂O=1 @25° C: 1.085

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: (undiluted) 13.1
Appearance: Fluorescent green liquid
Odor: Lightly perfumed odor

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable. Use water to cool source of fire.
Special Fire Fighting Procedures: For any chemical fire, use self-contained breathing apparatus and impervious clothing.
Unusual Fire and Explosion Hazards: None Known

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable in normal use.
Incompatibility: Strong acids and oxidizers.
Hazardous Decomposition Products: Unknown
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Concentrate will burn and irritate both eyes and skin.
INGESTION: Concentrate may burn or severely irritate mouth, esophagus and stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call physician.
INGESTION: Drink plenty of water. Do NOT induce vomiting. Contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in a sealed metal container for disposal.

Waste Disposal Methods: Flush with plenty of water. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Goggles or safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet CalClean, Special HD - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: CalClean, Special HD - Canada
Synonyms: Detergent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4823

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	5	N/A	N/A
Potassium Hydroxide	1310-58-3	3	2mg/m3 (ceiling)	2mg/m3 (ceiling)

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like Water
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: > 212°
Specific Gravity H₂O=1 @25° C: 1.085

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: (undiluted) 13.1
Appearance: Fluorescent green liquid
Odor: Lightly perfumed odor

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable. Use water to cool source of fire.
Special Fire Fighting Procedures: For any chemical fire, use self-contained breathing apparatus and impervious clothing.
Unusual Fire and Explosion Hazards: None Known

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable in normal use.
Incompatibility: Strong acids and oxidizers.
Hazardous Decomposition Products: Unknown
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Concentrate will burn and irritate both eyes and skin.
INGESTION: Concentrate may burn or severely irritate mouth, esophagus and stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call physician.
INGESTION: Drink plenty of water. Do NOT induce vomiting. Contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in a sealed metal container for disposal.

Waste Disposal Methods: Flush with plenty of water. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Goggles or safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Cal-Shield

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cal-Shield
Synonyms: Teflon-based coil protectant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4148

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Telomer B Phosphate (DEA	65530-63-4	1-10 %	N/A	N/A
Salt, 1:1:2)	65530-64-5	1-10 %	N/A	N/A
Telomer B Phosphate (DEA	65530-74-7	1-5 %	N/A	N/A
Salt, 2:1:1)	67-30-0	1-5 %	400 ppm*	400 ppm*
Telomer B Phosphate (DEA				
Salt, 1:1:1)				
Isopropyl alcohol				

*These PEL and TLV values are equivalent to 980 mg/cubic meter.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility in H₂O: Partial
Freezing Point °F: 32°
Boiling Point °F: 212°
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 7.0
Appearance: Clear liquid
Odor: Alcohol

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** Non-flammable
Extinguishing Media: Use media appropriate for surrounding material
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable at normal temperatures and storage conditions
Incompatibility: None
Hazardous Decomposition Products: Decomposition will not occur
Conditions Contributing to Hazardous Polymerizations: Polymerization will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): SKIN: May cause skin irritation with discomfort or rash. There are rare inconclusive reports of human sensitization to isopropyl alcohol. EYES: May cause eye irritation with discomfort, tearing, or blurring of vision. INHALATION: May cause irritation of the upper respiratory passages, with coughing and discomfort. INGESTION: May cause gastrointestinal irritation with upper abdominal pain, vomiting, and diarrhea. However, there may be no symptoms at all. Inhalation, ingestion, or skin contact may cause nonspecific discomfort, such as nausea, headache, abdominal pain, flushing of the face, hypotension, or weakness.

B. SUBCHRONIC, CHRONIC, OTHER: Higher exposures may lead to temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

INGESTION: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safeguards (Personnel) NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up. Spill Clean Up: Soak up with sawdust, sand, oil dry or other absorbent material.

Waste Disposal Methods: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: OUTDOORS: When applying outdoors, no respiratory protection is required. INDOORS: When applying indoors, respiratory protection is required if application takes place in a closed, sealed or non-ventilated area. Recommended respirator is NIOSH/MSHA carbon-type for organic vapor removal and particulate removal.

Eye Protection: Goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Where there is potential for skin contact have available, and wear as appropriate, impervious gloves, apron, pants, and jacket.

Ventilation: Apply with standard manual "pump-up" sprayer. Use with adequate ventilation, and follow above respiratory guidelines .

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid breathing vapors or mist. Avoid contact with eyes skin or clothing. Wash thoroughly after handling. Wash clothing after use.

Additional Information: Keep container tightly closed.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Cal-Treat 233

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cal-Treat 233
Synonyms: Aqueous Cooling Tower Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4149

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Zinc Nitrate	7779-88-6	<5	N/A	N/A
Sodium Molybdate	7631-95-0	<5	5mg/m3	5mg/m3

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: @20°
Boiling Point °F: 212 @14.7 psig
Specific Gravity H₂O=1 @25° C: 1.095

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): 87% @105°C/2 hrs
pH @ Solution: N/A
pH as Distributed: 7.0
Appearance: Slightly hazy straw liquid.
Odor: Bitter

IV - FIRE AND EXPLOSION

Flash Point F: None to boil **Flammable Limits:** N/A
Extinguishing Media: Use media suitable for surrounding fire.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: Freshly formed zinc oxide fumes (as from a fire) may cause metal fume fever, a temporary condition with chills, fever, tightness in chest, cough and leukocytes. Contains nitrites - dry powder may explode when exposed to heat or flame.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known. Do not allow evaporation to dryness.
Incompatibility: None known.
Hazardous Decomposition Products: Forced ignition of dried residues may produce CO, CO₂, phosphorus OX1.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Causes irritation. SKIN: May cause irritation. INGESTION: Overexposure causes upset to stomach. INHALATION: Inhalation of metal oxide fumes, formed when product is heated to decomposition, can result in metal fume fever, a temporary condition with chills, fever, tightness in chest, cough and leukocytes.

B. SUBCHRONIC, CHRONIC, OTHER: None known.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air and contact physician.

EYES: In case of eye contact, flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Wash thoroughly with soap and water.

INGESTION: Give large amounts of water.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not allow liquid to evaporate. Small spills may be mopped up or flushed to drain with water.

Waste Disposal Methods: Contact an authorized scavenger service.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses or goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective apron.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: If frozen, thaw to room temperature and mix thoroughly. (Roll drum) For industrial and institutional use only.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Coil Pow'r

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Coil Pow'r
Synonyms: Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4155

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	<5%	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: Circa 32°F
Boiling Point °F: @14.7 psig @212°
Specific Gravity H₂O=1 @25° C: 1.05

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): @105C/1hr. 90-91
pH @ 1.0% Solution: 10.5
pH as Distributed: 13
Appearance: Clear, purple liquid
Odor: Near odorless

IV - FIRE AND EXPLOSION

Flash Point F: None to boil **Flammable Limits:** N/A
Extinguishing Media: Suitable for surrounding area - water, dry chemical, foam CO₂.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: None.
Incompatibility: None known.
Hazardous Decomposition Products: Forced ignition of dried residues may produce CO, CO₂, nitrogen oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Detergent in the product is irritating to the eyes. SKIN: Product is not a primary skin irritant by FHSA. Prolonged and repeated contact may cause irritation as indicated by pH in product. INHALATION: Mists or spray can irritate nasal passages. INGESTION: Acute oral LD50 (rats) >5000 mg/kg. Ingestion of large quantities causes upset to the stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove source of irritation.

EYES: Flush eyes with flowing water for 15 minutes, call a physician.

SKIN: Rinse affected area thoroughly with flowing water.

INGESTION: Give large quantities of water or milk followed by vinegar or lemon juice and immediately contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills may be mopped up and residues flushed to the sewer with water. Rinse mop before storing. May be neutralized with diluted acetic acid.

Waste Disposal Methods: Dispose spent solutions in accordance with local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing mists or spray.

Eye Protection: Goggles or face shield **Gloves:** For manual cleaning

Other Clothing and Equipment: Not normally required.

Ventilation: Normal room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: This product will withstand an occasional accidental freezing without loss in its normal performance characteristics. It must be thoroughly thawed and agitated (roll drum) before being used. Store in heated area below 135°F.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Cork Insulation Tape

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Cork Insulation Tape
Synonyms: Same

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4217

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
None				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: NO	pH @ N/A Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: Soft, pliable, pressure sensitive material
Specific Gravity H₂O=1 @25° C: 1.3 +/- .05 g/cc	Odor:

IV - FIRE AND EXPLOSION

Flash Point F: 450° **Flammable Limits:** N/A
Extinguishing Media: Foam, CO₂, Dry Chemicals
Special Fire Fighting Procedures: Water unsuited for rubber fires
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; High temperature yields decomposition to isobutene
Incompatibility: Oxygen supplying chemicals and contact with acid clays at elevated temperatures
Hazardous Decomposition Products: CO, CO₂, H₂O, and isobutene
Conditions Contributing to Hazardous Polymerizations: May not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: N/A, EYES & SKIN: N/A
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: Flush with plenty of water
SKIN: Flush with plenty of water
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Repackage uncontaminated tape. Dispose of contaminated or unusable tape
Waste Disposal Methods: Bury tape waste in an approved land fill site

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: N/A **Gloves:** N/A

Other Clothing and Equipment: N/A

Ventilation: N/A

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent high temperature exposure

Additional Information: None

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Degreasing Solvent

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Degreasing Solvent
Synonyms: Chlorinated Hydrocarbon Solvent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4161

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Stoddard Solvent* (ORAL LD50 >10mg/kg)	8052-41-3	60	100ppm	100ppm
# 1,1,1-trichlorethane** (ORAL LD50 rabbit 5660mg/kg)	71-55-6	40	350ppm	350ppm
*STEL=200ppm; **STEL=450ppm				
# Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Slight
Freezing Point °F: N/A
Boiling Point °F: 165°F
Specific Gravity H₂O=1 @25° C: 0.982

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 100
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear liquid
Odor: Hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: 116F TOC **Flammable Limits:** N/AV

Extinguishing Media: Dry chemical, foam, CO₂.

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.

Unusual Fire and Explosion Hazards: Toxic gases and vapors such as hydrogen chloride, phosgene and carbon monoxide may be released if involved in a fire.

V - REACTIVITY DATA

Stability - Conditions to avoid: Keep away from heat and flame.

Incompatibility: Strong oxidizers, aluminum and magnesium powders and sodium potassium.

Hazardous Decomposition Products: See Section IV.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes irritation. May defat, dry and cause scaling of skin upon contact. INHALATION: Harmful if inhaled. May cause nausea, vomiting, coughing and respiratory irritation. INGESTION: Aspiration into lungs can occur resulting in pneumonitis, pulmonary edema & hemorrhage.

B. SUBCHRONIC, CHRONIC, OTHER: CHRONIC: Inhalation of Stoddard Solvent show results of hepatic and hematopoietic changes.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush skin with water. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable absorbing material. Dispose of in approved landfill.

Waste Disposal Methods: Dispose of in accordance with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH - approved respirator is recommended if exceeds OSHA TLV's for Stoddard Solvent & 1,1,1-trichloroethane.

Eye Protection: Eye goggles or full face shield. **Gloves:** Solvent-resistant rubber.

Other Clothing and Equipment: Not required.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Wash thoroughly after handling. Keep container closed.

Additional Information: Vapors are heavier than air and will collect in low areas. Use only in well-ventilated areas that will maintain air levels below limits established by federal, state, and local regulations.

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Degreasing Solvent - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Degreasing Solvent - Canada
Synonyms: Chlorinated Hydrocarbon Solvent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4828

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Stoddard Solvent* (ORAL LD50 >10mg/kg)	8052-41-3	60	100ppm	100ppm
# 1,1,1-trichlorethane** (ORAL LD50 rabbit 5660mg/kg)	71-55-6	40	350ppm	350ppm
*STEL=200ppm; **STEL=450ppm				
# Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Slight
Freezing Point °F: N/A
Boiling Point °F: 165°F
Specific Gravity H₂O=1 @25° C: 0.982

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 100
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear liquid
Odor: Hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: 116F TOC **Flammable Limits:** N/AV

Extinguishing Media: Dry chemical, foam, CO₂.

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.

Unusual Fire and Explosion Hazards: Toxic gases and vapors such as hydrogen chloride, phosgene and carbon monoxide may be released if involved in a fire.

V - REACTIVITY DATA

Stability - Conditions to avoid: Keep away from heat and flame.

Incompatibility: Strong oxidizers, aluminum and magnesium powders and sodium potassium.

Hazardous Decomposition Products: See Section IV.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes irritation. May defat, dry and cause scaling of skin upon contact. INHALATION: Harmful if inhaled. May cause nausea, vomiting, coughing and respiratory irritation. INGESTION: Aspiration into lungs can occur resulting in pneumonitis, pulmonary edema & hemorrhage.

B. SUBCHRONIC, CHRONIC, OTHER: CHRONIC: Inhalation of Stoddard Solvent show results of hepatic and hematopoietic changes.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush skin with water. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable absorbing material. Dispose of in approved landfill.

Waste Disposal Methods: Dispose of in accordance with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH - approved respirator is recommended if exceeds OSHA TLV's for Stoddard Solvent & 1,1,1-trichloroethane.

Eye Protection: Eye goggles or full face shield. **Gloves:** Solvent-resistant rubber.

Other Clothing and Equipment: Not required.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Wash thoroughly after handling. Keep container closed.

Additional Information: Vapors are heavier than air and will collect in low areas. Use only in well-ventilated areas that will maintain air levels below limits established by federal, state, and local regulations.

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet Degreasing Solvent ef

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Degreasing Solvent ef
Synonyms: Chlorinated Hydrocarbon Solvent

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4162

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Stoddard Solvent* (ORAL LD50 > 10mg/kg)	8052-41-3	60	100ppm	100ppm
p-Chlorobenzotrifluoride(a)	98-56-6	N/A	N/A	N/A
o-Chlorotoluene	95-49-8		50ppm	250ppm
Perchloroethylene(b,c,d,e,f)	127-18-4		25ppm	170ppm

*STEL=200ppm

- a) This item is not identified in the available haz. chemicals guides. However, its characteristics parallel hazards of material that is identified; therefore, it will be so identified until further identification.
- b) Ingredient subject to reporting under Sec. 313 of Title III (SARA) and 40 CFR 372.
- c) RCRA has determined that the waste for this chemical is listed as hazardous and must be handled in accordance with 40 CFR 260-281.
- d) CERCLA has notification requirements for releases or spills to the environment of the Reportable Quantity(RQ 100lbs) or greater amounts (40CFR302).
- e) Material is on the NTP list of possible carcinogens, IRAC's list of possible carcinogens, OR is regulated by OSHA as a possible carcinogen.
- f) Indicates listing in Table Z-2, 29 CFR 1910.1000, detailing acceptable ceiling concentration limits and acceptable maximum peak above ceiling concentration for an 8-hour shift.
- All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 10 @ 20°C

Evaporation Rate: (ether=1): <1

Solubility in H₂O: Negligible

Freezing Point °F: N/A

Boiling Point °F: 260-380°F

Specific Gravity H₂O=1 @25° C: 0.9834

Vapor Density (Air=1) 60-90° F: >1

VOC Content (% by wt.): 100

pH @ Solution: N/A

Volatile Organic Comp (VOC's): 8.2 lbs/gal

pH as Distributed: N/A

Appearance: Clear liquid

Odor: Hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: >140°F (estimated) **Flammable Limits:** LEL: 1.0; UEL 7.0

Extinguishing Media: Dry Chemical, foam, CO₂, water, water fog

Special Fire Fighting Procedures: Must wear full facepiece, self-contained breathing apparatus in positive pressure mode. Do not use solid stream of water; use fine water spray.

Unusual Fire and Explosion Hazards: Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water. Caution: material is combustible.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable/Extreme temperatures, open flame, sparks

Incompatibility: Strong oxidizers, strong acids.

Hazardous Decomposition Products: Thermal decomposition may yield CO, CO₂, HCL fumes

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Acute effects are possible irritation and discomfort; chronic exposure may cause liver, kidney or central nervous system damage. Perchloroethylene is a suspected cancer risk from animal studies, and is listed under IRAC as Group 28, possibly carcinogenic to humans.

B. SUBCHRONIC, CHRONIC, OTHER: INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting or even death in confined or poorly ventilated areas. The primary effect of inhalation is narcosis. SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate irritation or dermatitis. Problem may be accentuated by liquid becoming trapped against the skin by contaminated clothing and shoes. EYES: High vapor concentration or contact may cause irritation, discomfort or pain. May cause slight transient corneal injury. INGESTION: Swallowing this material may result in irritation of the mouth and GI tract. Vomiting and subsequent aspiration in to the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air; provide oxygen if breathing is difficult; administer CPR if victim is not breathing; seek medical attention.

EYES: Flush with water for 15 minutes, holding eyelids open; if irritation persists, seek medical attention.

SKIN: Remove contaminated clothing; wash effected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

INGESTION: If conscious, drink large amounts of water; DO NOT INDUCE VOMITING; take immediately to hospital. Do not give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: COMBUSTIBLE Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center at (800) 424-8802; refer to CERCLA 40 CFR 302 and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements.

Waste Disposal Methods: N/A

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH-approved respirator must be worn if OSHA threshold limits exceeded.

Eye Protection: goggles with side shield. **Gloves:** Solvent- resistant rubber or neoprene

Other Clothing and Equipment: Safety eye bath nearby.

Ventilation: Local and mechanical exhaust is required.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Material is combustible. Should be stored in tightly closed containers in cool, well ventilated area. Vapor may form explosive mixtures in air. All Sources of ignition should be controlled. Keep this and other chemicals out of reach of children; minimize body contact with this product as well as all chemicals. Avoid inhaling concentrated fumes or vapors.

Additional Information: Vapors are heavier than air and will collect in low areas. Use only in well-ventilated areas that will maintain air levels below limits established by federal, state, and local regulations.

NFPA

Health Hazard: 1
Fire Hazard.....: 2
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 2
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Drain-Solve

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Drain-Solve
Synonyms: Liquid caustic drain cleaner.

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4165

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide	1310-73-2	>40	2mg/m3	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: Complete	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: >13
Boiling Point °F: 290°F	Appearance: Clear liquid
Specific Gravity H₂O=1 @25° C: 1.50	Odor: None

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling. **Flammable Limits:** Product is non flammable.
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: Avoid skin and eye contact, and avoid breathing of vapors. Wear head and body protection and alkali respirator if exposure is likely to happen. Firewater may become corrosive if they contact product.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable .
Incompatibility: Strong acids, materials not resistant to alkalis, active metals (zinc, aluminum, magnesium, etc.).
Hazardous Decomposition Products: Contact with active metals can release flammable gas.
Conditions Contributing to Hazardous Polymerizations: Does not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: Breathing of mists causes respiratory irritation and can cause burns. Wear approved alkali mist respirator if exposure is likely. SKIN is Corrosive. Causes irritation and burns. EYES: Corrosive. Causes eye damage. INGESTION: Corrosive. Causes irritation and burning in mouth, esophagus, throat and stomach. Avoid swallowing. Can be fatal.
B. SUBCHRONIC, CHRONIC, OTHER: Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give artificial respiration or oxygen if needed. Get prompt medical attention.

EYES: Flush immediately with water for 15 minutes. Get prompt medical attention.

SKIN: Remove contaminated clothing. Flush skin thoroughly with water for 15 minutes. Get medical attention if burns persist.

INGESTION: Drink lots of water or, preferably, milk. Get medical attention if effects persist. Do not induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills can be flushed into normal drainage or into ground with copious amounts of water, or taken up with absorbent material. Larger spills should be contained by diking or other methods and held for collection and/or reuse, or for neutralization with acid before collection and disposal. People should use eye and skin protection and respirator.

Waste Disposal Methods: If neutralized, may be disposable in sewers if local regulations permit. Otherwise, send to licensed treatment and disposal facility. As supplied, this product is a RCRA hazardous waste. Rinse empty containers well before handling and disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Wear approved alkali mist respirator if exposure is likely.

Eye Protection: Splash-proof goggles **Gloves:** Alkali-resistant gloves

Other Clothing and Equipment: Wear alkali-resistant protective gloves, boots and clothing. Provide convenient safety showers and eyewash stations.

Ventilation: Use with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Check daily for leaks from containers, vessels, pumps and piping. Have water hoses and acid (caustic soda, lime, etc.) convenient. Only use containers and equipment designed for alkali service.

Additional Information:

NFPA

Health Hazard: 4

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 4

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET EMKARATE RL 100H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: EMKARATE RL 100H

Product Number: 4317-46

Synonyms: Refrigeration Oil

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.. None of the ingredients are subject to the reporting requirements of SARA, Section 313.

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20 ° C): <10

Evaporation Rate:

Solubility in H₂O: Insoluble

Freezing Point °F:

Boiling Point °F: >572 °F >300 °. C

Specific Gravity H₂O=1 @25° C: 0.973 (@ 15 ° C)

Vapor Density (Air=1) 60-90° F: No data

VOC Content (% by wt.): No data

pH @ Solution: No data

pH as Distributed: No data

Appearance: Liquid

Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 500 ° F, 260 ° C (COC) **Flammable Limits:** Not determined.

Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.

Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.

Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.

Incompatibility: Oxidizing agents.

Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. EYES: This material may irritate human eyes following contact. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. INHALATION: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritant to the upper respiratory tract.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: N/A

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person).

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and eye protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Glove:** Impervious gloves and apron.

Other Clothing and Equipment: Full faceshield in addition if splashing is possible. Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin and eye contact.

Additional Information:

NFPA

Health Hazard.....: 1

Fire Hazard.....: 1

Reactivity.....: 0

Specific Hazard...:

HMIS RATING

Health Hazard.....: 1

Fire Hazard.....: 1

Reactivity.....: 0

Personal Protection...: X (Sec. 9)

Revision Date: 06/21/2006

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Material Safety Data Sheet EMKARATE RL 100S

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 100S
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4317-56

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.. None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10	Vapor Density (Air=1) 60-90° F: No data
Evaporation Rate:	VOC Content (% by wt.): No data
Solubility in H₂O: Insoluble	pH @ Solution: No data
Freezing Point °F:	pH as Distributed: No data
Boiling Point °F: >572°F > 300°C	Appearance: Liquid
Specific Gravity H₂O=1 @25° C: 0.973 (@ 15°C)	Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 500°F, 260°C (COC) **Flammable Limits:** Not determined.
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. EYES: This material may irritate human eyes following contact. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. INHALATION: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritant to the upper respiratory tract.
B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person).

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and eye protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious gloves and apron.

Other Clothing and Equipment: Full faceshield in addition if splashing is possible. Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin and eye contact.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

EMKARATE RL 150S

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 150S
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4317-80

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	Not Listed	Not Listed
Antioxidant		<1		
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: <10 mm Hg @ 20°C
Evaporation Rate: N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: No data
Specific Gravity H₂O=1 @25° C: 0.976

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Colorless liquid
Odor: Mild

IV - FIRE AND EXPLOSION

Flash Point F: 504°F **Flammable Limits:** No data
Extinguishing Media: Water, fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full face-plate & protective clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: The acute oral LD₅₀ in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. EYES: No irritation is likely to develop following contact with human eyes. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. This product will probably not be absorbed through human skin. INHALATION: Inhalation data are not available on this material. Vapors and aerosols will probably irritate respiratory passages.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and respiratory protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles **Gloves:** Impervious gloves

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid breathing vapors or aerosols.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

EMKARATE RL 170H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 170H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4318-25

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	Not listed	Not listed
Antioxidant		<1		
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: <10 mm Hg @ 20°C
Evaporation Rate: N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.976+

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Pale straw liquid
Odor: Mild

IV - FIRE AND EXPLOSION

Flash Point F: 576°F 302°C **Flammable Limits:** No data
Extinguishing Media: Water, fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full face-plate & protective clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. EYES: No irritation is likely to develop following contact with human eyes. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. This product will probably not be absorbed through human skin. INHALATION: Inhalation data are not available on this material. Vapors and aerosols will probably irritate respiratory passages.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and respiratory protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious gloves.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid breathing vapors or aerosols.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity:

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity.....:

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet EMKARATE RL 220H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 220H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4318

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	N/A	N/A
Antioxidant		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: Insoluble
Freezing Point °F:
Boiling Point °F: Not determined
Specific Gravity H₂O=1 @25° C: 0.976

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Liquid
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 536°F, 280 dtg. C (COC) **Flammable Limits:** No data
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Use self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing vapors.
Hazardous Decomposition Products: Highly unlikely under intended handling and use.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritant to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. SKIN: Repeated or prolonged skin contact may result in mild irritation. Not a skin irritant per OSHA Hazard Communication Standard, 29 CFR 1910.1200. It is not a skin sensitizer in animal tests. EYES: May cause mild eye irritation. INGESTION: Low oral toxicity.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material. Short term tests and a consideration of the structure indicate that this substance is unlikely to be a carcinogenic hazard to humans.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient from exposure. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Irrigate with eyewash solution or clean water, holding eyelids apart, for at least 10 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Remove contaminated clothing. Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: DO NOT induce vomiting. Wash out mouth with water and give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person).

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during clean-up. Contain and absorb large spillages onto an inert, non-flammable absorbent carrier (such as earth or sand). Do not allow to enter drains, sewers, or waterways.

Waste Disposal Methods: Shovel it into a chemical waste container for disposal or recovery.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use NSHA-NIOSH approved for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles **Gloves:** Impervious gloves and apron.

Other Clothing and Equipment: Provide eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid prolonged or recurring skin contact. Avoid inhalation of high concentrations of mists or aerosols. Avoid ingress of moisture by keeping containers properly sealed when not in use. Product application requires that the product remain dry and free of excessive moisture pick-up. Keep away from strong oxidizing agents.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet EMKARATE RL 22H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 22H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4313-46

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	N/A	N/A
Antioxidant		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: <1%
Freezing Point °F:
Boiling Point °F: No data
Specific Gravity H₂O=1 @25° C: 0.998

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Pale yellow, clear liquid
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 464°F, 240°C (COC) **Flammable Limits:** (STP) No data
Extinguishing Media: Carbon dioxide, dry chemical or appropriate foam. If water is used, use with care to avoid possible violent production of steam.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Highly unlikely under intended handling and use. See Section 5.
Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. INGESTION: Low oral toxicity. EYES: By analogy with a similar substance this material is unlikely to cause irritation in man. SKIN: Repeated or prolonged skin contact may result in mild irritation. Not a skin irritant per OSHA Hazard Communication Standard, 29 CFR 1910.1200. By analogy with a similar substance this material is unlikely to be a skin sensitizer following contact with human skin.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. CONTAINER DISPOSAL: Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles **Gloves:** Impervious

Other Clothing and Equipment: Impervious gloves and apron. Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

EMKARATE RL 22N

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 22N
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4313-66

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester (New Jersey TSR: 08306620-5816P,5845P)		>99	N/A	N/A
Antioxidants		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications. None of the ingredients are subject to the reporting requirements of SARA, Section 313. All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mmHg at 20 °C): <0.1
Evaporation Rate:
Solubility in H₂O: <1%
Freezing Point °F:
Boiling Point °F: Not determined
Specific Gravity H₂O=1 @25° C: 0.989

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Pale yellow, clear liquid
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: (°C): 246 (open cup) **Flammable Limits:** No data
Extinguishing Media: Carbon dioxide, dry chemical, or appropriate foam. If water is used, use with care to avoid possible violent production of steam.
Special Fire Fighting Procedures: Use self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Highly unlikely under intended handling and use.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritant to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. SKIN: Repeated or prolonged skin contact may result in mild irritation. Not a skin irritant per OSHA Hazard Communication Standard, 29 CFR 1910.1200. It is not a skin sensitizer in animal tests. EYES: May cause mild eye irritation. INGESTION: Low oral toxicity.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material. Short term tests and a consideration of the structure indicate that this substance is unlikely to be a carcinogenic hazard to humans.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove patient from exposure. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Irrigate with eyewash solution or clean water, holding eyelids apart, for at least 10 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Remove contaminated clothing. Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: DO NOT induce vomiting. Wash out mouth with water and give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during clean-up. Contain and absorb large spillages onto an inert, non-flammable absorbent carrier (such as earth or sand). Do not allow to enter drains, sewers, or waterways.

Waste Disposal Methods: Shovel into a chemical waste container for disposal or recovery.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If needed, use NSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious

Other Clothing and Equipment: Provide eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid prolonged or recurring skin contact. Avoid inhalation of high concentrations of mists or aerosols. Avoid ingress of moisture by keeping containers properly sealed when not in use. Product application requires that the product remain dry and free of excessive moisture pick-up. Keep away from strong oxidizing agents.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET EMKARATE RL 32-3MAF

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 32-3MAF
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: Insoluble
Freezing Point °F:
Boiling Point °F: No data
Specific Gravity H₂O=1 @25° C: ~1

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Liquid, clear yellow
Odor: No data

IV - FIRE AND EXPLOSION

Flash Point F: 392°F, 200°C **Flammable Limits:** (STP)No data
Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical,
Special Fire Fighting Procedures: Self-contained breathing apparatus and suitable protective clothing must be worn in fire conditions..
Unusual Fire and Explosion Hazards: None known

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) Inhalation: High concentrations of mists or aerosols may irritate respiratory passages. **Ingestion:** In humans, irritation of the mouth, pharynx and esophagus can develop following ingestion of this product. No toxic effects are expected following ingestion of this product. **Eyes:** May cause eye irritation in man. **Skin:** Short contact periods with human skin are not usually associated with skin irritation. Repeated and/or prolonged contact may result in slight skin irritation.

B. SUBCHRONIC, CHRONIC, OTHER: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE : N/A

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical attention.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention.

INGESTION: DO NOT INDUCE VOMITING. Give 1 or 2 glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Contain spill. Soak up material with absorbent and shovel into a chemical waste container. Wash residue from spill area with water containing detergent and flush to a sewer serviced by a permitted wastewater treatment facility.

Waste Disposal Methods: Disposal should be in accordance with local, state or national legislation.

Container disposal: Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal. **Ecological Information:** No data

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally needed, if controls are adequate. If needed, use MSHA-NIOSH approved respirator for organic vapors

Eye Protection: Chemical tight goggles **Glove:** Impervious gloves.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing : Prevent skin contact. Prevent eye contact. Avoid breathing this material. Do not swallow.

Additional Information:

NFPA**Health Hazard.....: 1****Fire Hazard.....: 1****Reactivity.....: 0****Specific Hazard....:****HMIS RATING****Health Hazard.....: 1****Fire Hazard.....: 1****Reactivity.....: 0****Personal Protection....: X (Sec. 9)****Revision Date: 06/01/2006**

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Material Safety Data Sheet EMKARATE RL 32CF

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 32CF
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314-34

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: <1%
Freezing Point °F:
Boiling Point °F: 572
Specific Gravity H₂O=1 @25° C: 0.972

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Liquid, pale yellow
Odor: Mild Odor

IV - FIRE AND EXPLOSION

Flash Point F: 490°F, 254°C (COC) **Flammable Limits:** (STP) No data
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents
Special Fire Fighting Procedures: Self-contained breathing apparatus with full face piece and protective clothing.
Unusual Fire and Explosion Hazards: None known

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents
Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Inhalation: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. Ingestion: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. Eyes: No irritation is likely to develop following contact with human eyes. Skin: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact may result in mild skin irritation. This product will probably not be absorbed through human skin.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material. Short term tests and a consideration of the structure indicate that this substance is unlikely to be a carcinogenic hazard to humans

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical attention.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink and refer person to medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish, or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal. Ecological Information: Persistency and degradation: The product is substantially biodegradable in water

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally needed, if controls are adequate. If needed, use MSHA-NIOSH approved respirator for organic vapors

Eye Protection: Chemical tight goggles **Gloves:** Impervious gloves and apron.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid inhalation of high concentrations of mists.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet EMKARATE RL 32H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 32H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314-46

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: Insoluble
Freezing Point °F: Not determined
Boiling Point °F: Not determined
Specific Gravity H₂O=1 @25° C: 0.977

Vapor Density (Air=1) 60-90° F: Not determined
VOC Content (% by wt.): Not determined
pH @ Solution: Not determined
pH as Distributed: Not determined
Appearance: Pale yellow, clear liquid
Odor: Mild

IV - FIRE AND EXPLOSION

Flash Point F: 518°F, 270°C (COC) **Flammable Limits:** Not determined
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. In humans, irritation of the mouth, pharynx, esophagus and stomach may develop following ingestion of this product. EYES: No irritation is likely to develop following contact with human eyes. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. INHALATION: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink and refer person to medical attention. (Never give anything by mouth to an unconscious person).

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious

Other Clothing and Equipment: Impervious apron. Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid inhalation of high concentrations of mists.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet EMKARATE RL 32HB

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 32HB
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314-HB

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester		97	N/A	N/A
Antioxidant		< 1	N/A	N/A
Tricresyl Phosphate (TCP cont. <1.0% ortho isomer)	1330-78-5	< 2	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications. None of the ingredients are subject to the reporting requirements of SARA, Section 313. All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: No Data

Evaporation Rate: N/A

Solubility in H₂O: <1%

Freezing Point °F: N/A

Boiling Point °F: N/A

Specific Gravity H₂O=1 @25° C: 0.977

Vapor Density (Air=1) 60-90° F: N/A

VOC Content (% by wt.): N/A

pH @ N/A Solution: N/A

pH as Distributed: N/A

Appearance: Pale yellow, clear liquid

Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: °C: 270 (open cup) **Flammable Limits:** No Data

Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical. If water is used, use with care to avoid possible violent production of steam.

Special Fire Fighting Procedures: Self-contained breathing apparatus w/ full facepiece and protective clothing

Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.

Incompatibility: Strong oxidizing agents.

Hazardous Decomposition Products: Highly unlikely under intended handling and use. Combustion products: Carbon dioxide, carbon monoxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. EYES: Unlikely to cause eye irritation. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. Not a skin irritant per OSHA Hazard Communication standard, 29 CFR 1910.1200. INGESTION: Relative to other materials, this material is classified as "slightly toxic" by ingestion. In humans, irritation of the mouth, pharynx, esophagus and stomach may develop following ingestion of the product.

B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material. CARCINOGENICITY: The ingredients of this product are not classified as carcinogenic by ACGIH or IRAC, not regulated as carcinogens by OSHA and not listed as carcinogenic by NTP.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: No other adverse clinical effects have been associated with exposures to this material.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Wash out mouth with water and give 1 or 2 glasses of water to drink and refer person to medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and eye protection during cleanup. Contain spill. Keep out of sewers and drains. Contain and soak up material with inert, non-flammable absorbent such as sand or dirt. Shovel into a chemical waste container for disposal or recovery.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whole TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical-tight glasses. **Gloves:** impervious gloves and apron.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin and eye contact. Avoid inhalation of high concentrations of mists or vapors.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet EMKARATE RL 32S

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 32S
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314-56

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	08306620-5803P	>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 6.5
Evaporation Rate:
Solubility in H₂O: Insoluble (<1 mg/1)
Freezing Point °F:
Boiling Point °F: > 250°C
Specific Gravity H₂O=1 @25° C: 0.973

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Pale yellow, clear liquid.
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 250°C (open cup) **Flammable Limits:** No data
Extinguishing Media: Carbon dioxide, dry chemical or appropriate foam. Use water with care to avoid possible violent production of steam.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: This material is classified as "slightly toxic" by ingestion. EYES: This material is nonirritating in rabbit eye irritation studies; unlikely to cause eye irritation in man. SKIN: Repeated or prolonged skin contact may result in irritation. Not a skin irritant per OSHA Hazard Communication Standard, 20 CFR 1910.1200. It is not a skin sensitizer in animal tests. INHALATION: High concentration of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors.
B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Remove contaminated clothing. Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and respiratory protection during cleanup. Contain and absorb large spillages onto an inert, non-flammable absorbent carrier (such as earth or sand). Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If needed, use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious

Other Clothing and Equipment: Impervious gloves and apron. Eyewash station and safety shower in work areas.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid breathing vapors or aerosols. Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool area.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

EMKARATE RL 46H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 46H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4315-H

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester (New Jersey TSR#:08306620-5845P,5846P)		99%	N/A	N/A
Additives		1%	N/A	N/A
Antioxidant				

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.

None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: <10 (mm Hg @ 20°C)
Evaporation Rate:
Solubility in H₂O: Insoluble
Freezing Point °F:
Boiling Point °F: Not determined
Specific Gravity H₂O=1 @25° C: 0.977

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Liquid, pale yellow
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 500°F, 260°C (COC) **Flammable Limits:** No data
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. In humans, irritation of the mouth, pharynx, esophagus and stomach may develop following ingestion of this product. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. EYES: This material may irritate human eyes following contact.
B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink and refer person to medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and eye protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment or original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles **Gloves:** Impervious

Other Clothing and Equipment: Full faceshield in addition if splashing is possible. Eyewash station and safety shower in work area. Impervious gloves and apron.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin and eye contact. Avoid inhalation of high concentrations of mists.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet EMKARATE RL 68H

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 68H
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316-41

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol ester	08306620-5845P,	>99	Not listed	Not listed
Additives	5846P	<1	Not listed	Not listed

Ingredients not precisely identified are proprietary or non hazardous. Values are not product specifications.

None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: No data
Evaporation Rate: ($H_2O=1$): Not Determined
Solubility in H_2O : Less than 1%
Freezing Point °F: Not Determined
Boiling Point °F: Not determined
Specific Gravity $H_2O=1$ @25° C: 0.977

Vapor Density (Air=1) 60-90° F: Not Determined
VOC Content (% by wt.): None Volatile
pH @ Solution: Not Determined
pH as Distributed: Not Determined
Appearance: Pale yellow, clear liquid
Odor: Mild

IV - FIRE AND EXPLOSION

Flash Point F: 518°F (open cup) 270°C **Flammable Limits:** Not Determined
Extinguishing Media: Carbon dioxide, water fog, dry chemical or appropriate foam. If water is used, use with care to avoid possible violent production of steam.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: Highly unlikely under intended handling & use. Combustion products: Carbon Dioxide, Carbon Monoxide
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. EYES: May cause mild irritation
SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. INHALATION: High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors.

B. SUBCHRONIC, CHRONIC, OTHER: No adverse effects are presently known.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Remove contaminated clothing. Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and respiratory (if mist or vapors are present) protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Container disposal: Empty container retains product residue. Observe all hazard precautions. do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally needed, if controls are adequate. If needed, use MSHA-NIOSH approved respirator for organic vapors

Eye Protection: Chemical tight goggles **Gloves:** Impervious

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid prolonged or recurring skin contact. Avoid inhalation or high concentrations of mists or aerosols. Avoid ingress or moisture by keeping containers properly sealed when not in use. Product application requires that the product remain dry and free of excessive moisture pick-up. Keep away from strong oxidizing agents.

Additional Information: Prevent skin and eye contact. Avoid inhalation of high concentrations of mists.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet EMKARATE RL 68HP

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 68HP
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316-76

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	08306620-5845P,	>98	N/A	N/A
Additives	5846P	<2	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg @ 20°C) No data
Evaporation Rate:
Solubility in H₂O: <1%
Freezing Point °F:
Boiling Point °F: No data
Specific Gravity H₂O=1 @25° C: 0.9763

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Pale yellow, clear liquid
Odor: Mild odor

IV - FIRE AND EXPLOSION

Flash Point F: 500°F (open cup) **Flammable Limits:** No data
Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical, halogenated agents.
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux conditions.
Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Highly unlikely under intended handling and use. Combustion products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. EYES: This material may irritate human eyes following contact. SKIN: Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact can result in skin irritation. INGESTION: The acute oral LD50 in rat is probably above 2,000 mg/kg. Relative to other materials, this material is classified as "slightly toxic" by ingestion. In humans, irritation of the mouth, pharynx, esophagus and stomach may develop following ingestion of the product.
B. SUBCHRONIC, CHRONIC, OTHER: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and eye protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally needed, if controls are adequate. If needed use MSHA-NIOSH approved respirator for organic vapors.

Eye Protection: Chemical tight goggles **Gloves:** Impervious gloves and apron.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin and eye contact. Avoid inhalation of high concentrations of mists or vapors.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet EMKARATE RL 68S

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: EMKARATE RL 68S
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316-S

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	08306620-5843P,	>99	N/A	N/A
Antioxidant	5844P	<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
None of the ingredients are subject to the reporting requirements of SARA, Section 313.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: <10 (mm Hg @ 20°C)
Evaporation Rate:
Solubility in H₂O: <1%
Freezing Point °F:
Boiling Point °F: >482 °F
Specific Gravity H₂O=1 @25° C: 0.973

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Pale yellow, clear liquid
Odor: Mild odor.

IV - FIRE AND EXPLOSION

Flash Point F: 473°F (open cup) **Flammable Limits:** No data
Extinguishing Media: Carbon dioxide, dry chemical or appropriate foam. If water is used, use with care to avoid possible violent production of steam
Special Fire Fighting Procedures: Self-contained breathing apparatus with full facepiece and protective clothing.
Unusual Fire and Explosion Hazards: Low fire hazard. Unlikely to ignite except in high heat flux condition. Thermal decomposition will evolve irritant vapors.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Highly unlikely under intended handling and use. Combustion products: Carbon dioxide, carbon monoxide. Thermal decomposition will evolve irritant vapors.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. EYES: Mild irritation is likely to develop following contact with human eyes. SKIN: Repeated and/or prolonged contact can result in minor irritation. This material was not a skin sensitizer in animal testing. The potential is low for developing sensitization following contact with human skin. This product probably will not be absorbed through human skin. INGESTION: This material is classified as "slightly toxic" by ingestion.
B. SUBCHRONIC, CHRONIC, OTHER: No other adverse clinical effects have been associated with exposures to this material.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Remove contaminated clothing. Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin and respiratory protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If needed, use MSHA-NIOSH approved respirator for organic vapors, dusts and mists whose TLV is greater than 0.05 mg/m³.

Eye Protection: Chemical tight goggles. **Gloves:** Impervious gloves and apron.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid breathing vapors or aerosols. Storage: Avoid ingress of moisture by keeping containers properly sealed when not in use. Product application requires that the product remain dry and free of excessive moisture pick-up. Keep away from strong oxidizing agents.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 11/22/06
<u>Product Name</u> Evap-Fresh Evaporator Cleaner & Disinfectant	<u>Product Number</u> 4166-08	<u>Product Use</u> Foaming Evaporator Coil Cleaner & Disinfectant		<u>EPA Registration #</u> 1839-83-65516

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Alkyl dimethyl benzyl ammonium chloride (C12-18)	0.105	68391-01-5	No Data.	No Data.
Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	0.105	85409-23-0	No Data.	No Data.

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Clear liquid, May cause irritation to eyes and skin.

Potential Health Effects

Eyes: This product may cause irritation to the eyes.

Skin: This product may cause irritation to the skin.

Ingestion: Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Inhalation: Exposure via inhalation not likely. High vapor or aerosol concentrations may be irritating to the nose, throat and upper respiratory tract.

Chronic Exposure: No Data.

Carcinogenicity: Not listed as a carcinogenic according to IARC, NTP or OSHA.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

Skin: For skin contact flush with large amounts of water. Immediately take off all contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before reuse.

Ingestion: If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Note to Physician: If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat the affected person appropriately.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. If symptoms persist, get medical attention.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: >201°F

Autoignition Temp: No Data°C/No Data°F

Hazardous Products of Combustion: May form carbon monoxide.

Flammable Limits in Air: No data

Extinguishing Media: Dry chemical, foam, carbon dioxide, water fog.

Fire and Explosion Hazards: No Data.

Special Firefighting Procedures: Firefighters should wear full fire-fighting turn-out gear(full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch or walkthrough spilled material. Wear appropriate personal protective equipment during cleanup. Small Spills: Absorb or cover with dry earth, sand or other non-combustible material & transfer to containers for later disposal. Large Spills: Dike ahead of liquid spill for later disposal. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of the National Pollutant Discharge Elimination System(NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with skin, eyes & clothing. Avoid breathing mists or vapors of this product. Wash hands thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Storage Requirements: Store in dry, well-ventilated area. Avoid freezing or excessive heat. DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Under normal conditions, respirator is not normally required. If vapors are present or irritation is experienced, NIOSH approved respiratory protection for ammoniacal vapors should be worn.

Eye Protection: Wear safety glasses with side shields.

Protective Clothing: Use impervious gloves. Wear suitable protective clothing.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): Use with adequate ventilation. Eye wash fountain and emergency showers are recommended.

Diethylene glycol monobutyl ether 112-34-5

NIOSH - Health Standards - Exposure Limits reduce exposure to lowest feasible concentration.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: >0°C/>32°F	% Volatile by Weight: No Data.%
Color: Clear	Vapor Density [air =1]: No Data.	Evaporation Rate: No Data.
Odor: No Data.	Vapor Pressure: No Data.	Specific Gravity: (1.007 g/ml), 8.38 lb/gal
Boiling Point: 100°C/212°F	Solubility in Water: complete	pH (concentrate): 11.7

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong acids, alkalies and oxidizing agents.

Reactive Conditions to avoid: Avoid strong oxidizing agents.

Decomposition Products: Upon decomposition, this product may yield oxides of nitrogen and ammonia.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
Diethylene glycol monobutyl ether	112-34-5		Oral Rat: 5660 mg/kg; Oral Mouse: 2400 mg/kg; Dermal Rabbit: 2700 mg/kg	

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
Toxic to fish. Toxic to aquatic organisms.	Information available upon request. Please contact Nu-Calgon Wholesaler Inc.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Container Disposal: Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. For containers 1 gallon or less: Do not reuse empty container (bottle, can, bucket). Wrap container and put in trash.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not Regulated by DOT.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	No Data.	No Data.	No Data.	No Data.
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	This product may contain the following ingredients known to the State of California to cause cancer, birth defects or other reproductive harm: Nitrotriacetic acid (NTA) (CAS RN: 139-13-9) Ethylene Oxide (CAS RN: 75-21-8)
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	This product is considered a pesticide, and is therefore excluded from US TSCA Regulations.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 1 Flammability: 1 Reactivity:0

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 11/22/06
<u>Product Name</u> Cal-Spray Evap-Fresh Coil Cleaner & Disinfectant	<u>Product Number</u> 4166-75	<u>Product Use</u> Foaming Evaporator Coil Cleaner & Disinfectant		<u>EPA Registration #</u> 1839-84-65516

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Isobutane	5	75-28-5	No Data.	No Data.
Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	0.1	85409-23-0	No Data.	No Data.
Alkyl dimethyl benzyl ammonium chloride (C12-18)	0.1	68391-01-5	No Data.	No Data.

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Clear liquid, Danger! Flammable, Irritant. May cause moderate irritation to the eyes. May cause moderate irritation to the skin. May be harmful if swallowed.

Potential Health Effects

Eyes: This product may cause moderate irritation to the eyes.

Skin: This product may cause moderate irritation to the skin.

Ingestion: This product may be harmful if it is swallowed. may cause dizziness, incoordination, headache, nausea, and vomiting.

Inhalation: High vapor or aerosol mist concentrations may be irritating to the nose, throat and upper respiratory tract. Effects may include headaches, dizziness, drowsiness, anesthetic and may have other central nervous system effects.

Chronic Exposure: No Data

Carcinogenicity: No Data.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

Skin: For skin contact flush with large amounts of water. Immediately take off all contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before reuse.

Ingestion: If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Note to Physician: If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat the affected person appropriately.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. If symptoms persist, get medical attention.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: <73°F

Autoignition Temp: 462°C/863.6°F

Hazardous Products of Combustion: May form carbon monoxide.

Flammable Limits in Air: OSHA Flammability Class: Flammable IA

Extinguishing Media: Dry chemical, foam, carbon dioxide, water fog.

Fire and Explosion Hazards: CONTENTS UNDER PRESSURE. Do not use near fire, sparks or flame. Do not puncture or incinerate container. Exposure to temperature above 120°F may cause bursting.

Special Firefighting Procedures: Firefighters should wear full fire-fighting turn-out gear(full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate personal protective equipment during cleanup. Stop leak if you can do it without risk. Do not touch or walkthrough spilled material. Small Spills: Absorb or cover with dry earth, sand or other non-combustible material & transfer to containers. Use clean non-sparking tools to collect absorbed material. Large Spills: Dike ahead of liquid spill for later disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with skin, eyes & clothing. Avoid breathing mists or aerosols of this product. Keep product from heat, sparks, or open flame. Eliminate all sources of ignition. Wash hands before eating, drinking, smoking, or using toilet facilities. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Storage Requirements: Store in dry place no lower in temperature than 50°F or higher than 120°F. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Under normal conditions, respirator is not normally required. If vapors are present or irritation is experienced, NIOSH approved respiratory protection for ammoniacal vapors should be worn.

Eye Protection: Wear chemical goggles and face shield.

Protective Clothing: Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. Use impervious gloves.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits. Eye wash fountain and emergency showers are recommended.

Isobutane 75-28-5

ACGIH - Occupational Exposure Limits - TWAs 1000ppm TWA

NIOSH - Pocket Guide - Target Organs CNS

NIOSH - Pocket Guide - TWAs 800ppm TWA; 1900mg/m3 TWA

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: Not est. °C/Not est. °F	% Volatile by Weight: >90%
Color: Clear	Vapor Density [air =1]: Heavier than air	Evaporation Rate: Faster than Butyl Acetate
Odor: No Data.	Vapor Pressure: No Data.	Specific Gravity: (0.962 g/ml), 8 lb/gal
Boiling Point: <35°C/<95°F	Solubility in Water: No Data.	pH (concentrate): 11.7 (as is)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Will not occur.

Incompatibilities: This product may react with strong oxidizing agents, anionic compounds.

Reactive Conditions to avoid: Keep away from heat, sparks, or open flame.

Decomposition Products: Upon decomposition, this product may yield oxides of nitrogen and ammonia.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
Isobutane	75-28-5			Inhalation Rat: 57pph/15M

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
No Data	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Container Disposal: Replace cap & dispose of container in trash. Do not incinerate or puncture. Treatment, storage, transportation & disposal must be in accordance with applicable Federal, State/Provincial & Local regulations. Regulations may vary in different locations. Characterization & compliance with applicable laws are the responsibility solely of the generator.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the hazardous Waste representative at the nearest EPA Regional Office for guidance.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity	1950	16 oz. Aerosol Can	(ORM)-D
IMO (Water)	No data	No data	No data	No data
ICAO (Air)	No data	No data	No data	No data

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No data
SARA Title III: (Superfund Amendments & Reauthorization Act)	This product may contain the following ingredients known to the State of California to cause cancer, birth defects or other reproductive harm: Nitritotriacetic acid (NTA) (CAS RN: 139-13-9)Ethylene Oxide (CAS RN: 75-21-8)
OSHA: (Occupational Safety & Health Administration)	No data
TSCA: (Toxic Substance Control Act)	This product is considered a pesticide, and is therefore excluded from US TSCA Regulations.
VOC: (volatile Organic Compounds)	RVOC 5% (Isobutane)
CPR: (Canadian Controlled Products Regulations)	No data
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No data
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No data
CERCLA: (Comprehensive Response Compensation & Liability Act)	No data
IDL: (Canadian Ingredient Disclosure List)	No data
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health: 2 Flammability: 4 Reactivity: 0

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



Material Safety Data Sheet

Evap Pow'r - C

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Evap Pow'r - C
Synonyms: Evaporator coil cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4168

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# 2-butoxyethanol	(111-76-2)	<10	25ppm (skin) ne	25ppm
sodium xylene sulfonate	(1300-72-7)	<15		ne

Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372.
This product contains no chemicals rated as carcinogens or suspect carcinogens by N.T.P., I.A.R.C., or O.S.H.A. VOC Content: 5.3% (by wt)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1) Unknown
Solubility in H₂O: Complete
Freezing Point °F: Unknown
Boiling Point °F: ~210
Specific Gravity H₂O=1 @25° C: 1.04

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 80
pH @ 25% Solution: 7.5
pH as Distributed: 8.0
Appearance: Clear, green liquid
Odor: Chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: Not flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable or combustible.
Special Fire Fighting Procedures: None known.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: None known.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes eye and skin irritation. Readily absorbed through skin. INHALATION: Mists may be irritating. INGESTION: May cause upset stomach if swallowed.

B. SUBCHRONIC, CHRONIC, OTHER: None known.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.

EYES: Flush with plenty of water for 15 minutes. If irritation develops, call a physician.

SKIN: Wash with soap and plenty of water for 15 minutes. If irritation develops, call a physician.

INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Take up on absorbant material. Flush residue to sewer with plenty of water.

Waste Disposal Methods: May be sewered in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required

Eye Protection: Safety glasses **Gloves:** Rubber

Other Clothing and Equipment: None required.

Ventilation: Good general room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes and skin. Avoid breathing mists.

Wear safety glasses and gloves when handling.

Additional Information: Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Evap Pow'r - RTU

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Evap Pow'r - RTU
Synonyms: Evaporator coil cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4169

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# 2-butoxyethanol	111-76-2	<2	25ppm (skin)	25ppm
sodium xylene sulfonate	1300-72-7		ne	
# Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.		<2		ne

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1) Unknown
Solubility in H₂O: Complete
Freezing Point °F: Unknown
Boiling Point °F: ~210°
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 95
pH @ 25% Solution: N/A
pH as Distributed: 8.0
Appearance: Clear, pale green liquid
Odor: Faint chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable or combustible.
Special Fire Fighting Procedures: None known.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong acids/oxidizers; do not mix with chlorinated detergents (bleach).
Hazardous Decomposition Products: Burning may produce oxides of carbon.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause irritation. INHALATION: Mists may be slightly irritating to upper respiratory tract. INGESTION: Not expected to be harmful if swallowed.
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water. If irritation persists, get medical attention.
SKIN: Wash well with soap and plenty of water for 15 minutes. Call physician.
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Take up on absorbent material. Flush residue to sewer with plenty of water.

Waste Disposal Methods: May be sewered in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: None required.

Ventilation: Good general room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes and skin. Avoid breathing mists.

Wear safety glasses and rubber gloves when handling. Keep out of the reach of children.

Additional Information: Wash thoroughly after handling.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

Evap-Treat

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Evap-Treat

Product Number: 4173

Synonyms: Inorganic Sodium Calcium Magnesium Phosphate

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL

According to the OSHA Hazard
Communication Standard, 29CFR
1910.1200, this product contains no
hazardous ingredients.

CAS#

N/A

% By Wt

N/A

TLV

N/A

PEL

N/A

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Solid

Evaporation Rate: (ether=1) N/A

Solubility in H₂O: Complete

Freezing Point °F: N/A

Boiling Point °F: Solid

Specific Gravity H₂O=1 @25° C: Solid

Vapor Density (Air=1) 60-90° F: Solid

VOC Content (% by wt.): Solid

pH @ 1% Solution: 7.0-7.5

pH as Distributed: N/A

Appearance: Granular, glass-like particles.

Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Nonflammable **Flammable Limits:** N/A

Extinguishing Media: Product is nonflammable.

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus is essential.

Unusual Fire and Explosion Hazards: None Known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.

Incompatibility: Strong acids and bases.

Hazardous Decomposition Products: None Known.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) EYES: Instillation of 0.1% and 5% solutions of a chemically related compound in rabbit eyes followed by irrigation caused no serious injury. SKIN: Toxicity testing on a chemically related compound has shown it to be only mildly irritating to rabbit skin following a 24HR. exposure. However, product has sharp edges which may cause skin abrasion. INGESTION: According to toxicity testing on a chemically related product, it is only moderately toxic through ingestion. The acute oral LD50 (rats) is 2900mg/kg.

B. SUBCHRONIC, CHRONIC, OTHER: The chemically related compound did not exhibit genetic activity when tested according to the Ames assay. Data from a reproduction study using rats fed a diet of 0.5% of that compound and carried through three generations showed no deficiencies, malformations or chronic effects.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Good First Aid should be followed in all cases of exposure. In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

SKIN: If contact is made, rinse and wash skin thoroughly.

INGESTION: If swallowed, drink plenty of water and contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and repackage. Hose spill area well since product can make floors slippery.

Waste Disposal Methods: Dispose of in a landfill in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required.

Eye Protection: Safety glasses. **Glove:** Not required for normal use.

Other Clothing and Equipment: Not required.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Store in a dry place. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard.....: 0

Fire Hazard.....: 0

Reactivity.....: 0

Specific Hazard....:

HMIS RATING

Health Hazard.....: 0

Fire Hazard.....: 0

Reactivity.....: 0

Personal Protection...: X (Sec. 9)

Revision Date: 06/21/2006

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Material Safety Data Sheet Fluorescent Gas Leak Detector

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Fluorescent Gas Leak Detector
Synonyms: Bubble-Forming Liquid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4184

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Ethylene glycol (ORAL LD50 8.5mg/kg rat) # Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.	107-21-1	<40	50ppm ceiling (vapor)	NE

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1): Unknown
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: Unknown
Specific Gravity H₂O=1 @25° C: 1.085

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): @85
pH @ Solution: N/A
pH as Distributed: 7.3 - 7.6
Appearance: Fluorescent green liquid
Odor: Mild chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: >200°F **Flammable Limits:** Unknown
Extinguishing Media: In case of fire, use CO₂ foam or dry chemical.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat and open flame.
Incompatibility: Can react violently with strong oxidizers, dehydrating agents such as sulfuric acid, acetic anhydride.
Hazardous Decomposition Products: Carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: May cause eye irritation. SKIN: Essentially non - irritating. INGESTION: Harmful if swallowed. May cause nausea, dizziness, central nervous system damage, kidney disorders. INHALATION: Prolonged or repeated breathing of vapors may cause headache, nausea, dizziness.
B. SUBCHRONIC, CHRONIC, OTHER: Repeated or prolonged inhalation of vapors may cause central nervous system damage. Repeated contact with skin may cause sensitization in some individuals. Ethylene glycol has caused birth defects in laboratory animals.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.

EYES: Flush with plenty of water for at least 15 minutes. If irritation persists, call a physician.

SKIN: Wash area with soap and plenty of water.

INGESTION: If swallowed, call physician immediately. Give one or two glasses of water and induce vomiting by sticking finger down throat. Never give anything by mouth or attempt to induce vomiting in an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush spill with water or wipe up and incinerate.

Waste Disposal Methods: Incinerate or flush to drain served by sanitary sewer in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required

Eye Protection: Avoid eye contact **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: Vapors are minimal at room temperatures. Normal room ventilation should be sufficient.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Avoid breathing mists or vapors. Wash thoroughly after handling.

Additional Information: Keep out of reach of children. Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Foam Insulation Tape

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Foam Insulation Tape
Synonyms: Same

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4219

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
None				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: NO	pH @ N/A Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: Soft, pliable, pressure sensitive
Specific Gravity H₂O=1 @25° C:	Odor:

IV - FIRE AND EXPLOSION

Flash Point F: 350°F **Flammable Limits:** N/A
Extinguishing Media: Water Fog, Foam, Carbon dioxide, Dry chemical
Special Fire Fighting Procedures: Water unsuited for rubber fires
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: This product is stable and hazardous decomposition will not occur.
Incompatibility: Strong oxidizing agents, Lewis acids
Hazardous Decomposition Products: Carbon monoxide, hydrocarbons, HCl, smoke, fumes
Conditions Contributing to Hazardous Polymerizations:

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: N/A; EYES & SKIN: N/A
B. SUBCHRONIC, CHRONIC, OTHER: None known
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Not applicable
EYES: Treat as any foreign particle. Flush eyes with running water for several minutes until all of the material is removed. Seek medical attention if irritation persists.
SKIN: Wash thoroughly with soap and water if any signs of irritation appear. Individuals who show symptoms of an allergic reaction or sensitization should seek medical attention and should avoid further contact with this product.
INGESTION: Not applicable

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Repackage uncontaminated tape.

Waste Disposal Methods: Recover material and place into suitable container. Dispose of in accordance with federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: N/A **Gloves:** N/A

Other Clothing and Equipment: N/A

Ventilation: N/A

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent high temperature exposure.

Additional Information: None

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 1

Reactivity: 1

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Foam-Brite

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Foam-Brite
Synonyms: Alkaline Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4178

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide (Caustic Soda)	1310-73-2	>20	2mg/M3 Ceiling	

VOC Content: 2.8%
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Not Determined	Vapor Density (Air=1) 60-90° F: Unknown
Evaporation Rate: (ether=1) Same as H ₂ O	VOC Content (% by wt.): N/A
Solubility in H₂O: Complete	pH @ 10% Solution: 12.9
Freezing Point °F: N/A	pH as Distributed: 14.0
Boiling Point °F: 212°F	Appearance: Clear, reddish-orange liquid
Specific Gravity H₂O=1 @25° C: 1.252 +/- 0.005	Odor: No Distinct Odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Water spray (Fog); Dry chemical; CO₂; Foam
Special Fire Fighting Procedures: Do not enter confined fire-spaces without protective clothing and self-contained air supply.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach)
Hazardous Decomposition Products: Burning may produce carbon monoxide and/or carbon dioxide.
Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYE, SKIN, ORAL: Corrosive material. Will cause burns of skin and eyes with prolonged contact. Eye damage likely if contact is prolonged. Generated mists may be seriously irritating and cause damage to respiratory tract if swallowed. Harmful or fatal if swallowed. May cause severe burns of mucous membranes, stomach, nausea, vomiting - possible internal damage.
B. SUBCHRONIC, CHRONIC, OTHER: Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: &

SKIN: Flush eyes with water for at least 15 minutes and call a physician immediately. Skin: Wash affected area with large amounts of soap and water. If irritation persists call physician.

INGESTION: Do not induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by diking with soil or other inert material and CAREFULLY neutralize with dilute acid. Mop, pump or absorb with inert material and reclaim into sound containers for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. Keep non-neutralized material out of sewers, storm drains, surface water and soil.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH approved respirator where mists or sprays may be generated. (Caustic mist cartridge type)

Eye Protection: Chemical goggles, face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective clothing to minimize contact (boots, apron, faceshield)

Ventilation: Product is intended for outdoor use.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Corrosive Material - Handle All Containers Carefully. Wash thoroughly after handling. Keep containers closed when not in use. Avoid contact with leather or wool.

Additional Information: None

NFPA

Health Hazard: 3

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 3

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Freez-Kontr'l

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Freez-Kontr'l
Synonyms: Monopropylene Glycol

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4188

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Propylene Glycol	57-55-6	70 - 80%		
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 0.1
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: -76° F
Boiling Point °F: 360° F
Specific Gravity H₂O=1 @25° C: 1.04

Vapor Density (Air=1) 60-90° F: 2.6
VOC Content (% by wt.): slightly volatile
pH @ Solution: N/A
pH as Distributed:
Appearance: Light blue liquid slightly vis.
Odor: Near odorless

IV - FIRE AND EXPLOSION

Flash Point F: 211°F **Flammable Limits:** (% vol. in air) -17.4
Extinguishing Media: CO₂ Dry chemical, Alcohol type foam
Special Fire Fighting Procedures: Do not enter fire area without proper protection. See "decomposition products possible." Fight fire from safe distance/protected location. Heat may build pressure/rupture closed containers. Spreading fire. Increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/steam explosion. Burning liquid may float on water. Although soluble, may not be practical to extinguish fire by water dilution. Notify authorities if liquid enters sewer/public water.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; avoid high temperatures and severe oxidizing conditions.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: Incomplete combustion may produce carbon monoxide and other harmful gases/vapors.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): Slight eye irritant, No inhalation hazard identified from data. No skin absorption hazard identified from data. No skin irritation identified from data. No ingestion hazard identified from data.
B. SUBCHRONIC, CHRONIC, OTHER: No chronic health effects are expected from normal use.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush with water for 20-30 minutes retract eyelids often. Obtain medical attention if pain, blinking, tears or redness persist.

SKIN: Not expected to present a significant skin hazard under anticipated conditions of normal use.

INGESTION: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Evacuate/limit access. Prevent flow to sewers/public water. Stop release. Notify fire/environmental authorities. Restrict water use for cleanup. Slippery walking. Spread granular cover. Soak up small spill with inert solids. Use suitable disposal containers on water soluble material may float or sink. May biodegrade. Contain/minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

Waste Disposal Methods: Landfill solids at permitted sites. Use registered transporters. Burn concentrated liquids. Diluting with clean, low viscosity fuel. Avoid flameouts. Assure emissions comply with applicable regulations. Avoid overloading/poisoning plant biomass. Assure effluent complies with applicable regulations. Contaminated product, soil or water should not be designated RCRA Hazardous waste.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None when used with adequate ventilation.

Eye Protection: Safety glasses **Gloves:** Recommended

Other Clothing and Equipment: None required.

Ventilation: Use with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Hygroscopic, use dry nitrogen or low dew point air for tank padding. Keep drums tightly closed to prevent contamination. Store at 65 - 90°F.

Additional Information: Clean equipment with water.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Freez-Therm

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Freez-Therm
Synonyms: Inhibited Ethylene Glycol

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4189

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Ethylene glycol**	107-21-1	>95	100 ppm	50 ppm
Dipotassium phosphate	7758-11-4	>2		
Water	7732-18-5	>2		

**Subject to reporting requirements under SARA, Section 313, Title III
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 2.2 mmHg@68°F
Evaporation Rate:
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 325°F
Specific Gravity H₂O=1 @25° C:

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 10 +/- 0.5
Appearance: Yellow-green liquid
Odor: Glycol

IV - FIRE AND EXPLOSION

Flash Point F: 246°F by TCC **Flammable Limits:** LFL: 3.2 by vol. % in air UFL: N/A

Extinguishing Media: Water fog, CO₂, dry chemical or foam.

Special Fire Fighting Procedures: Material will not burn unless preheated. Cool fire-exposed containers with water. Wear appropriate protective clothing, gloves, helmet with face shield, and NIOSH approved self contained breathing apparatus.

Unusual Fire and Explosion Hazards: Combustion may produce carbon, CO, CO₂ and water. Dense smoke released when burned without sufficient oxygen.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable

Incompatibility: Oxidizing materials and compounds.

Hazardous Decomposition Products: CO and unidentified organic compounds may be formed during combustion.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Product is moderately to severely irritating to the eyes; vapors can also cause severe eye irritation. SKIN: Product may be mildly irritating to the skin; repeated and prolonged contact may result in absorption through skin. INHALATION: Vapors may be mildly irritating to the lungs. INGESTION: Product may be harmful or fatal if swallowed. May produce central nervous system depression or kidney damage which may be fatal.

B. SUBCHRONIC, CHRONIC, OTHER: Excessive exposure may cause irritation to upper respiratory tract.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Preexisting skin, eye and respiratory disorders may be aggravated by exposure to product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

EYES: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN: Flush thoroughly with water. If irritation develops, get medical attention.

INGESTION: If swallowed, induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Evacuate/limit access. Prevent flow to sewers/public water. Stop release. Notify fire/environmental authorities. Restrict water use for cleanup. Slippery walking. Spread granular cover. Soak up small spill with inert solids. Use suitable disposal containers on water soluble material may float or sink. May biodegrade. Contain/minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

Waste Disposal Methods: Landfill solids at permitted sites. Use registered transporters. Any disposal practice must be in compliance with all federal, state/provincial and local laws and regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If exposure exceeds occupational exposure limits, use NIOSF-approved respirator to prevent over-exposure.

Eye Protection: Chemical goggles. **Gloves:** Chemical- resistant gloves.

Other Clothing and Equipment: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below their exposure guidelines.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool, dry place with adequate ventilation. Keep away from flames and high temperatures. Wash with soap and water after handling/using and before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

Additional Information: Keep out of the reach of children.

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Freez-Therm UH

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Freez-Therm UH
Synonyms: Uninhibited Ethylene Glycol

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4189-02

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Ethylene glycol**	107-21-1	>96	100 ppm	50 ppm
Water	7732-18-5	<4		

**Subject to reporting requirements under SARA, Section 313, Title III
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 2.2 mmHg@68°F
Evaporation Rate:
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 325°F
Specific Gravity H₂O=1 @25° C:

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 10 +/- 0.5
Appearance: Yellow-green liquid
Odor: Glycol

IV - FIRE AND EXPLOSION

Flash Point F: 246°F by TCC **Flammable Limits:** LFL: 3.2 by vol. % in air UFL: N/A
Extinguishing Media: Water fog, CO₂, dry chemical or foam
Special Fire Fighting Procedures: Material will not burn unless preheated. Cool fire-exposed containers with water. Wear appropriate protective clothing, gloves, helmet with face shield, and NIOSH approved self contained breathing apparatus.
Unusual Fire and Explosion Hazards: Combustion may produce carbon, CO, CO₂ and water. Dense smoke released when burned without sufficient oxygen.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable.
Incompatibility: Oxidizing materials and compounds.
Hazardous Decomposition Products: CO and unidentified organic compounds may be formed during combustion.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Product is moderately to severely irritating to the eyes; vapors can also cause severe eye irritation. SKIN: Product may be mildly irritating to the skin; repeated and prolonged contact may result in absorption through skin. INHALATION: Vapors may be mildly irritating to the lungs. INGESTION: Product may be harmful or fatal if swallowed. May produce central nervous system depression or kidney damage which may be fatal.

B. SUBCHRONIC, CHRONIC, OTHER: Excessive exposure may cause irritation to upper respiratory tract.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Preexisting skin, eye and respiratory disorders may be aggravated by exposure to product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

EYES: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN: Flush thoroughly with water. If irritation develops, get medical attention.

INGESTION: If swallowed, induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Evacuate/limit access. Prevent flow to sewers/public water. Stop release. Notify fire/environmental authorities. Restrict water use for cleanup. Slippery walking. Spread granular cover. Soak up small spill with inert solids. Use suitable disposal containers on water soluble material may float or sink. May biodegrade. Contain/minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

Waste Disposal Methods: Landfill solids at permitted sites. Use registered transporters. Any disposal practice must be in compliance with all federal, state/provincial and local laws and regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If exposure exceeds occupational exposure limits, use NIOSH-approved respirator to prevent over-exposure.

Eye Protection: Chemical goggles. **Gloves:** Chemical-resistant gloves.

Other Clothing and Equipment: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below their exposure guidelines.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool, dry place with adequate ventilation. Keep away from flames and high temperatures. Wash with soap and water after handling/using and before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

Additional Information: Keep out of the reach of children.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Gas Leak Detector

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Gas Leak Detector
Synonyms: Chemical Leak Detector

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4180

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Isopropanol* (ORAL LD50 5840mg/kg Rat) *STEL=500ppm All ingredients are TSCA listed.	67-63-0	5	400ppm	400ppm

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown	Vapor Density (Air=1) 60-90° F: Unknown
Evaporation Rate: (ether=1): Unknown	VOC Content (% by wt.): 5
Solubility in H₂O: Complete	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Unknown	Appearance: Clear solution
Specific Gravity H₂O=1 @25° C: 1.10 - 1.15	Odor: Isopropanol odor

IV - FIRE AND EXPLOSION

Flash Point F: 102°F **Flammable Limits:** Unknown
Extinguishing Media: In case of fire use CO₂, foam or dry chemical.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat and open flame.
Incompatibility: Can react violently with strong oxidizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause irritation to both eyes and skin. INGESTION: Large quantities may cause upset to stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, contact a physician.
INGESTION: If swallowed, call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush spill with water or wipe up and incinerate.

Waste Disposal Methods: Flush product waste down drain with plenty of water, rinse container and discard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required

Eye Protection: Avoid eye contact **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: Normal room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep away from heat and open flame. Wash thoroughly after handling.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 2

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Gas Leak Detector - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Gas Leak Detector - Canada
Synonyms: Chemical Leak Detector

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4832

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Isopropanol* (ORAL LD50 5840mg/kg Rat) *STEL=500ppm All ingredients are TSCA listed.	67-63-0	5	400ppm	400ppm

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown	Vapor Density (Air=1) 60-90° F: Unknown
Evaporation Rate: (ether=1): Unknown	VOC Content (% by wt.): 5
Solubility in H₂O: Complete	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Unknown	Appearance: Clear solution
Specific Gravity H₂O=1 @25° C: 1.10 - 1.15	Odor: Isopropanol odor

IV - FIRE AND EXPLOSION

Flash Point F: 102°F **Flammable Limits:** Unknown
Extinguishing Media: In case of fire use CO₂, foam or dry chemical.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat and open flame.
Incompatibility: Can react violently with strong oxidizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause irritation to both eyes and skin. INGESTION: Large quantities may cause upset to stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, contact a physician.
INGESTION: If swallowed, call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush spill with water or wipe up and incinerate.

Waste Disposal Methods: Flush product waste down drain with plenty of water, rinse container and discard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required

Eye Protection: Avoid eye contact **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: Normal room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep away from heat and open flame. Wash thoroughly after handling.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 2

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Green Clean

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Green Clean
Synonyms: General purpose cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4186

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Dipropylene Glycol Methyl Ether	34590-94-8	< 6	100 ppm	150 ppm
Sodium Carbonate	497-19-8	< 6	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Not determined
Evaporation Rate: (ether=1): ~same
Solubility in H₂O: Complete
Freezing Point °F: Unknown
Boiling Point °F: 212°
Specific Gravity H₂O=1 @25° C: 1.04

Vapor Density (Air=1) 60-90° F: Not Deter.
VOC Content (% by wt.): Not Determined
pH @ 25% Solution: 8.0
pH as Distributed: 11.7
Appearance: Clear, green liquid
Odor: Chemical

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable or combustible.
Special Fire Fighting Procedures: None known.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: None known; product is stable
Incompatibility: Strong acids/oxidizers. Do not mix with chlorinated detergents
Hazardous Decomposition Products: Burning may produce oxides of carbon
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Direct contact with eyes may cause mild to moderate irritation with local redness and swelling of conjunctiva. Prolonged or repeated skin contact may cause irritation. Ingestion may cause irritation of mouth, throat and stomach with possible nausea and vomiting. Excessive inhalation of vapors may cause respiratory tract irritation and central nervous system effects including headache and nausea.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call A physician.

EYES: Flush with water for at least 15 minutes and call a physician immediately

SKIN: Wash with large amounts of soap and water. If irritation persists, consult a physician

INGESTION: Do NOT induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not touch or walk through spilled material. Stop leak if you can without risk. Dike ahead of large spills to prevent run-off. Mop, pump or take up with sand or other inert absorbent and reclaim into containers for reuse, recycle, or proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and Local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required

Eye Protection: Safety glasses **Gloves:** Rubber gloves ,PVC

Other Clothing and Equipment: None required.

Ventilation: Good general room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: No special requirements if product is handled according to good manufacturing practices. Keep container closed when not in use. Wash thoroughly after handling.

Additional Information: Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ice Guard

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ice Guard
Synonyms: Heterogeneous Catalyst

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4209

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Aluminum Oxide	1344-28-1	>96	10	15
Copper	7440-50-8	<3	1	1
Silver	7440-22-4	<1	0.1	0.1

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Solid
Evaporation Rate: N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F:
Specific Gravity H₂O=1 @25° C: Solid

Vapor Density (Air=1) 60-90° F: Solid
VOC Content (% by wt.): less than 5%
pH @ Solution:
pH as Distributed: N/A
Appearance: Black-Green Spherical Particles
Odor: None

IV - FIRE AND EXPLOSION

Flash Point F: Flammable Limits:

Extinguishing Media: Use extinguishing agent applicable to surrounding fire.

Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus operated in pressure-demand mode, (MSHA/NIOSH approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: May emit toxic fumes when heated to decomposition. Dusts at sufficient concentrations can form explosive mixtures with air.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage

Incompatibility: N/A

Hazardous Decomposition Products: N/A

Conditions Contributing to Hazardous Polymerizations: No

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Inhalation may cause irritation of eyes and nose. Inhalation of fumes may cause metal fume fever (flu-like symptoms: fever, cough, chest pains, muscle weakness, nausea, vomiting, and a high white blood cell count).

B. SUBCHRONIC, CHRONIC, OTHER: Inhalation of high dust concentration may damage the respiratory tract. Aluminum oxide has been linked to emphysema and other respiratory diseases. Chronic ingestion of aluminum has been linked to central nervous system disorders including Alzheimer's Disease. Workers with kidney disease are at an increased risk. Individuals with lung diseases and/or kidney diseases should be protected from exposure.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: EYES: Scratch or abrasion, damage to cornea (necrosis). SKIN: Irritation, rash, itching, discoloration of the skin. INGESTION: May cause vomiting, upset stomach. INHALATION: Coughing, wheezing, shortness of breath, difficult breathing, chest pain.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. Seek immediate medical attention.

EYES: Immediately flush eyes with plenty of water (15 minute minimum). Get medical attention if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: If swallowed, induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and repackage. Minimize airborne particulates. Protect against inhalation of dusts. Avoid contact with skin. Use eye protection.

Waste Disposal Methods: Dispose of in a landfill in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required for normal use.

Eye Protection: Not required for normal use. **Gloves:** Not required for normal use.

Other Clothing and Equipment: N/A

Ventilation: Normal

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep product sealed when not in use. Store in a dry place. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

Spray Guard

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Spray Guard

Product Number: 4205

Synonyms: Hard Surface Sanitizing System

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Denatured Alcohol	64-17-5			
Hydrogen Peroxide Complex	7722-84-1			

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 45 mmHg at 68°F

Vapor Density (Air=1) 60-90° F: 1.59

Evaporation Rate:

VOC Content (% by wt.):

Solubility in H₂O: Complete

pH @ Solution:

Freezing Point °F:

pH as Distributed:

Boiling Point °F: 173°F

Appearance: Clear liquid; Color: Colorless

Specific Gravity H₂O=1 @25° C:

Odor:

IV - FIRE AND EXPLOSION

Flash Point F: 56°F **Flammable Limits:** In Air - Lower 3.3%Upper 19% by Volume

Extinguishing Media: Use Dry Chemical, "alcohol" foam, or carbon dioxide; water may be ineffective.

Special Fire Fighting Procedures: Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire and Explosion Hazards: Emits toxic fumes under fire conditions.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable at normal temperatures and storage conditions

Incompatibility: Sensitive to light. Rust.

Hazardous Decomposition Products: Oxygen

Conditions Contributing to Hazardous Polymerizations: Polymerization will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) May cause skin irritation. May be harmful if absorbed through the skin. May cause eye irritation.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician

SKIN: Flush skin with water after contact. Wash contaminated clothing before reuse.

INGESTION: If swallowed, wash out mouth with water provided person is conscious. Call a physician

VIII - SPILL OR LEAK PROCEDURE

Spill Management:

Waste Disposal Methods:

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid Inhalation

Eye Protection: Avoid Contact with eyes, skin and clothing **Glove:** Rubber

Other Clothing and Equipment:

Ventilation: Handle in the presence of adequate ventilation. Avoid repeated or prolonged exposure.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Handle in the presence of adequate ventilation. Detached or outside storage is preferred All ignition sources should be eliminated. Keep spray bottle away from sun and heat.

Additional Information: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

NFPA**Health Hazard.....: 0****Fire Hazard.....: 3****Reactivity.....: 1****Specific Hazard....:****HMIS RATING****Health Hazard.....: 0****Fire Hazard.....: 3****Reactivity.....: 1****Personal Protection....: X (Sec. 9)****Revision Date: 06/22/2006**

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MATERIAL SAFETY DATA SHEET

Castrol 22CC

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Castrol 22CC
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4313

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Polyol Ester		>99	N/A	N/A
Additives		<1	N/A	N/A

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mm Hg at 20°C): <10
Evaporation Rate:
Solubility in H₂O: Insoluble
Freezing Point °F:
Boiling Point °F: No data
Specific Gravity H₂O=1 @25° C: 0.99

Vapor Density (Air=1) 60-90° F: No data
VOC Content (% by wt.): No data
pH @ Solution: No data
pH as Distributed: No data
Appearance: Liquid, clear
Odor: ester-Odor

IV - FIRE AND EXPLOSION

Flash Point F: 428°F, 220°C (open cup) **Flammable Limits:** (STP)No data
Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical,
Special Fire Fighting Procedures: Self-contained breathing apparatus with full face piece and protective clothing.
Unusual Fire and Explosion Hazards: None known

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions.
Incompatibility: Strong Oxidizing agents
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) Inhalation: No toxic effects are known to be associated with inhalation of vapors from this material. High concentrations of mist may be slightly irritating to the upper respiratory tract. Thermal decomposition will evolve irritant vapors. **Ingestion:** In human, irritation of the mouth, pharynx esophagus and stomach can develop following ingestion of this product. May be harmful if swallowed. **Eyes:** May cause eye irritation **Skin:** Short contact periods with human skin are not usually associated with skin irritation; repeated and/or prolonged contact may result in mild skin irritation. This product will probably not be absorbed through human skin.

B. SUBCHRONIC, CHRONIC, OTHER: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE :

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical attention.

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated and decontaminate footwear before reuse.

INGESTION: DO NOT INDUCE VOMITING. Give 1 or 2 glasses of water to drink and refer person to medical personnel. (Never give anything by mouth to an unconscious person.)

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear skin protection during cleanup. Contain spill. Keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container.

Waste Disposal Methods: Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish, or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

Ecological Information: Persistency and degradation: The product is substantially biodegradable in water

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally needed, if controls are adequate. If needed, use MSHA-NIOSH approved respirator for organic vapors

Eye Protection: Chemical tight goggles **Glove:** Impervious gloves and apron.

Other Clothing and Equipment: Eyewash station and safety shower in work area.

Ventilation: Use ventilation adequate to maintain safe levels.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent skin contact. Avoid inhalation of high concentrations of mists.

Additional Information:

NFPA**Health Hazard.....: 1****Fire Hazard.....: 1****Reactivity.....: 0****Specific Hazard....:****HMIS RATING****Health Hazard.....: 1****Fire Hazard.....: 1****Reactivity.....: 0****Personal Protection....: X (Sec. 9)****Revision Date: 06/21/2006**

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet Icematic E100

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic E100
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4317-05

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	not list'd	not list'd
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	not list'd	not list'd

Contains no SARA 313 compounds
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: (mmHg) negligible
Evaporation Rate: Negligible
Solubility in H₂O: Insoluble
Freezing Point °F: Not determined
Boiling Point °F: >500°F
Specific Gravity H₂O=1 @25° C: 0.98

Vapor Density (Air=1) 60-90° F: 5
VOC Content (% by wt.): negligible
pH @ not applicable Solution: -
pH as Distributed: N/A
Appearance: Clear colorless liquid
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: 450°F min (method: PMCC) **Flammable Limits:** N/D
Extinguishing Media: Carbon dioxide, foam, dry chemical.
Special Fire Fighting Procedures:
Unusual Fire and Explosion Hazards:

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal conditions - none known.
Incompatibility: Strong oxidizers, heat and sources of ignition.
Hazardous Decomposition Products: Smoke, fumes, CO, CO₂
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting, abdominal pain & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: No obvious long-term hazards

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposure area to fresh air immediately. If breathing has stopped, perform CPR. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing. Wipe material from skin. Wash thoroughly with soap and water. If irritation develops, get medical attention. Wash contaminated clothing. Use skin cream for defatted areas.

INGESTION: Do not induce vomiting; aspiration hazard. Do not give anything by mouth. Do not leave victim unattended. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Seek medical attention immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Large spills: wear appropriate protective clothing. Do not permit product to enter streams, sewers or other waterways. Dike spill and eliminate leak. Absorb with inert material and store in closed containers until disposal. Flush area with water. Where feasible, remove contaminated soil. Small spills: Neutralize and/or soak up spill with inert absorbent; store in closed containers until disposal.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses with side-shields **Gloves:** Neoprene gloves

Other Clothing and Equipment: Impervious protective clothing and chemical-resistant safety shoes should be worn to minimize contact. Emergency shower and eyewash facility should be provided in all areas in which this product is handled.

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Keep out of the reach of children.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Icematic E68

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic E68
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316-16

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	Not listed	Not listed
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	Not listed	Not listed

VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Negligible
Evaporation Rate: (ether=1): Negligible
Solubility in H₂O: Not Soluble in Water
Freezing Point °F: N/A
Boiling Point °F: >500°F
Specific Gravity H₂O=1 @25° C: 0.98

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Clear, colorless liquid
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >400°F (COC) **Flammable Limits:** ND

Extinguishing Media: Dry chemical, CO₂, Foam

Special Fire Fighting Procedures: Use water as fog or spray to cool containers exposed to fire. Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Empty containers may contain product residue or vapors which can ignite explosively; do not cut, weld or drill on or near empty or full containers.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable - avoid oxidizing agents, heat, open flame.

Incompatibility: None

Hazardous Decomposition Products: Smoke, fumes, CO₂, CO

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: N/A

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR; contact physician.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing. Wipe material from skin. Wash thoroughly with soap and water.

INGESTION: Do not induce vomiting; aspiration hazard. Consult a physician immediately. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Consult a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not permit product to enter streams, sewers or other waterways. Dike spill and eliminate leak. Absorb with inert material and store in closed containers until disposal.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses **Gloves:** Resistant type gloves

Other Clothing and Equipment: N/A

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV. Greater than 60 +3/Min. recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Icematic SW 100

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 100
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4317

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	Not listed	Not listed
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	Not listed	Not listed

VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Negligible
Evaporation Rate: Negligible
Solubility in H₂O: Not soluble in Water
Freezing Point °F: N/A
Boiling Point °F: >500°F
Specific Gravity H₂O=1 @25° C: 0.98

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear, colorless liquid
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >450°F (COC) **Flammable Limits:** ND
Extinguishing Media: Dry chemical, CO₂, Foam
Special Fire Fighting Procedures: Use water as fog or spray to cool containers exposed to fire. Wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Empty containers may contain product residue or vapors which can ignite explosively; do not cut, weld or drill on or near empty or full containers.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable - avoid oxidizing agents, heat, open flame
Incompatibility: Strong oxidizers, heat and sources of ignition.
Hazardous Decomposition Products: Smoke, fumes, CO, CO₂.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: N/A

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR; contact physician. Keep person warm and at rest. Treat symptomatically and supportively.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing. Wash thoroughly with soap and water. Contact a physician if irritation persists. Use skin cream for defatted areas.

INGESTION: Do not induce vomiting; aspiration hazard. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Consult a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not permit product to enter streams, sewers or other waterways. Dike spills and eliminate leak. Absorb with inert material and store in closed containers until disposal.

Waste Disposal Methods: All recovered material should be packaged, labeled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety goggles **Gloves:** Resistant type gloves

Other Clothing and Equipment: N/A

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV. Greater than 60+ 3/Min. recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Icematic SW 220

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 220
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4318-05

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	Not listed	Not listed
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	Not listed	Not listed

VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Negligible
Evaporation Rate: Negligible
Solubility in H₂O: Insoluble
Freezing Point °F: Not determined
Boiling Point °F: >500°
Specific Gravity H₂O=1 @25° C: 0.9800

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear colorless
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >464°F 240°C **Flammable Limits:** N/D N/D
Extinguishing Media: Dry chemical, foam, carbon dioxide
Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed container cool. Water spray may be used to flush spills away from exposure. Firefighters must use self-contained breathing apparatus. Prevent run-off from fire control from entering streams or drinking water supply.
Unusual Fire and Explosion Hazards:

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable under normal conditions - avoid oxidizing agents, heat, open flame.
Incompatibility: None
Hazardous Decomposition Products: Smoke, fumes, CO, CO₂
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.
B. SUBCHRONIC, CHRONIC, OTHER: None
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: See acute effects above.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure to fresh air immediately. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR; keep person warm and at rest. Contact physician immediately.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing. Wipe material from skin. Wash thoroughly with soap and water. If irritation persists, get medical attention. Wash clothing before reuse. Use skin cream for defatted areas.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything by mouth. Do not leave victim unattended. If vomiting occurs or if comatose or lethargic, place on the left side with head down. Consult a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not permit product to enter streams, sewers or other waterways. Dike spill and eliminate leak. Absorb with inert material and store in closed containers until disposal.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses **Gloves:** Neoprene-type gloves

Other Clothing and Equipment: Impervious protective clothing and chemical-resistant safety shoes to minimize contact. Emergency shower and eye wash facility should be provided.

Ventilation:

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Icematic SW 32

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 32
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%		Not listed
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%		Not listed

VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Negligible
Evaporation Rate: (ether=1): Negligible
Solubility in H₂O: Not Soluble in Water
Freezing Point °F: N/A
Boiling Point °F: >500°F
Specific Gravity H₂O=1 @25° C: 0.98

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Clear, colorless liquid
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >400°F (COC) **Flammable Limits:** ND

Extinguishing Media: Dry chemical, CO₂ Foam

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water as fog or spray to cool containers exposed to fire. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, wear self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams or drinking water supply.

Unusual Fire and Explosion Hazards: Empty containers may contain product residue or vapors which can ignite explosively; do not cut, weld or drill on or near empty or full containers.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable - avoid oxidizing agents, heat, open flame.

Incompatibility: None

Hazardous Decomposition Products: Smoke, fumes, CO, CO₂

Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting, diarrhea and abdominal pain. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: N/A

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure to fresh air immediately. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water. Get medical attention if irritation persists. Use skin cream for defatted areas.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything mouth because this material can enter the lungs and cause severe damage. Do not leave victim unattended. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Seek immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Large Spills: wear appropriate protective clothing. Stop source of leak if possible. Dike, contain spill and recover free liquid. Prevent entry into waterways. Soak up residue with an inert material such as clay, sand or other suitable materials; store and dispose of properly. Flush area with water. Where feasible and appropriate, remove contaminated soil. Small Spills: Neutralize and/or soak up spill with inert absorbent. Store in a closed container and dispose of properly.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses **Gloves:** Resistant type gloves

Other Clothing and Equipment: N/A

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV. Greater than 60 cu.ft. per minute is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Icematic SW 32C

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 32C
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4314-C

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
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Contains no other ingredients now known to be hazardous as defined by OSHA.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Negligible	Vapor Density (Air=1) 60-90° F: >5
Evaporation Rate: Negligible	VOC Content (% by wt.): Not tested
Solubility in H₂O: Insoluble	pH @ N/A Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: >500°F	Appearance: Clear colorless liquid
Specific Gravity H₂O=1 @25° C: 0.9800 +/-	Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: 400°F min./203°C min. **Flammable Limits:** ND ND
Extinguishing Media: Carbon dioxide, dry chemical or foam
Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire exposed container cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus. Prevent run-off from fire control or dilution from entering streams or drinking water supply.
Unusual Fire and Explosion Hazards: Smoke, fumes, CO, CO₂

V - REACTIVITY DATA

Stability - Conditions to avoid: None known, Stable under normal conditions
Incompatibility: Strong oxidizers, heat and sources of ignition.
Hazardous Decomposition Products: Smoke, fumes, CO, CO₂.
Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: May cause gastrointestinal distress with symptoms of nausea, vomiting, diarrhea, and abdominal pain. EYES & SKIN: May cause irritation INHALATION: Vapor may be irritating to the respiratory tract.
B. SUBCHRONIC, CHRONIC, OTHER: N/A
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: N/A

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposed area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

EYES: In case of contact, flush eyes with plenty of water. Get medical attention if irritation occurs.

SKIN: In case of contact, wash skin with plenty of soap and water. Remove contaminated clothing. Get medical attention if irritation persists. Wash clothing before reuse. Use skin cream for defatted areas.

INGESTION: Aspiration hazard: DO NOT INDUCE VOMITING or give anything by mouth because this material can enter the lungs or cause severe damage. Do not leave victim unattended. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Seek immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Large spills: wear appropriate protective clothing. Stop source of leak if possible. Dike, contain spill and recover free liquid. Prevent entry into waterways. Soak up residue with an inert absorbent such as clay, sand or other suitable materials. Store and dispose of properly. Flush area with water. Where feasible and appropriate, remove contaminated soil. Small spills: Neutralize and/or soak up spill with inert absorbent. Store in a closed container and dispose of properly.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations. Disposal of this material to the land may be banned by federal law (40 CFR 268).

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Good industrial hygiene practices recommend that engineering controls be used to reduce environmental concentrations to the threshold limit value (TLV), if applicable. If an applicable TLV is exceeded provide NIOSH approved respiratory protection. Provide sufficient mechanical, general, and/or local exhaust to maintain exposure below any applicable TLV or PEL.

Eye Protection: Safety glasses w/side shield or Chemical goggles **Gloves:** Use neoprene type gloves when handling this product.

Other Clothing and Equipment: Impervious protective clothing and chemical resistant safety shoes should be worn to minimize contact. Wash contaminated clothing with soap and water and dry before reuse. Emergency shower and eyewash facility should be provided in all areas in which this product is handled.

Ventilation: Maintain adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants.

Additional Information: No component known to be present in this product at >0.1% is presently listed as a carcinogen by IARC, NTP or OSHA.

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity.....: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 12/15/06
<u>Product Name</u> Icematic SW 46	<u>Product Number</u> 4315-04	<u>Product Use</u> Refrigeration Lubricant		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
This product does not contain any hazardous ingredients at or above regulated thresholds.				

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: CAUTION! MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. In accordance with good industrial hygiene & safety work practices, airborne exposures should be controlled to the lowest extent practicable.

Potential Health Effects

Eyes: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Ingestion may cause gastrointestinal irritation and diarrhea.

Inhalation: May cause respiratory tract irritation.

Chronic Exposure: None identified.

Carcinogenicity: No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the IARC. No component of this product present at levels greater than 0.1% is identified as a carcinogen by U.S. NTP or the U.S. OSHA.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Skin: Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 246°C/475°F

Autoignition Temp: No Data.°C/No Data.°F

Hazardous Products of Combustion: These products are carbon oxides (CO, CO2)

Flammable Limits in Air: May be combustible at high temperatures.

Extinguishing Media: In case of fire, use water fog, foam, dry chemicals, or carbon dioxide.

Fire and Explosion Hazards: This material is not explosive as defined by established regulatory criteria. Non-explosive in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidizing material.

Special Firefighting Procedures: Fire-fighters should wear positive pressure self-contained breathing apparatus(SCBA) and full turnout gear.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment. Follow all fire fighting procedures. If emergency personnel are unavailable, contain spilled material. For small spills add absorbent scoop up material and place in a sealed, liquid proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways. Splash goggles. Full suit. Boots. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Use only with adequate ventilation. In accordance with good industrial hygiene & safety work practices, airborne exposures should be controlled to the lowest extent practicable. Do not ingest.

Storage Requirements: Keep container tightly closed. Keep container in a cool, well-ventilated area. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use only with adequate ventilation.

Eye Protection: Avoid contact with eyes. Safety goggles with side shields or chemical goggles.

Protective Clothing: Wear suitable gloves.

Exposure Guidelines: Avoid prolonged or repeated contact with skin. Wear suitable protective clothing. Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day. Contact local authority for acceptable exposure limits.

Specific Engineering Controls (such as ventilation, enclosed process): Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data. °C/No Data. °F	% Volatile by Weight: No Data. %
Color: Clear. Colorless	Vapor Density [air =1]: No Data.	Evaporation Rate: No Data.
Odor: Petroleum Odor (slight)	Vapor Pressure: No Data.	Specific Gravity: No Data.
Boiling Point: 260°C/500°F	Solubility in Water: No Data.	pH (concentrate): No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: The product is stable.

Hazardous Polymerization: Will not occur.

Incompatibilities: Reactive with oxidizing agents, acids, alkalis.

Reactive Conditions to avoid: Not available.

Decomposition Products: carbon oxides (CO, CO2)

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen, reproductive toxin, teratogenic or embryotoxic.				

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
No testing has been performed by the manufacturer.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local and regional authorities.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	No Data.	No Data.	No Data.	No Data.
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Not regulated under Sec. 302 and 40 CFR Part 355. SARA 311/312 MSDS distribution-chemical inventory-hazardous id: ICEMATIC SW 46: Immediate (Acute) Health Hazard.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	In compliance.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	In compliance.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	102a/103 Hazardous Substances (40 CFR Part 302.4) This material is not regulated under CERCLA Sections 103 and 107.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health 1; Flammability 1; Physical Hazard 0; Personal Protection B.

SECTION 16 – OTHER INFORMATION

Density: 965 kg/m³ (0.965 g/cm³) at 15.6°C; Viscosity: Kinematic: 46 mm²/s (46 cSt) at 40°C.

AICS: In compliance.

DSL: Not listed. IECS: Not determined. ENCS: Not determined. ECL: In compliance. PICCS: In compliance.

Massachusetts RTK: 2,6-di-tert-butyl-p-cresol

New Jersey: 2,6-di-tert-butyl-p-cresol

Pennsylvania: 2,6-di-tert-butyl-p-cresol (generic environmental hazard)

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



Material Safety Data Sheet Icematic SW 68

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 68
Synonyms: Polyol Ester Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	Not listed	Not listed
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	Not listed	Not listed

VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Negligible
Evaporation Rate: (ether=1): Negligible
Solubility in H₂O: <0.1%
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.97

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Clear, colorless liquid
Odor: Slight petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >464°F (COC) **Flammable Limits:** ND

Extinguishing Media: Dry chemical, CO₂ Foam

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water as fog or spray to cool containers exposed to fire. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, wear self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams or drinking water supply.

Unusual Fire and Explosion Hazards: Empty containers may contain product residue or vapors which can ignite explosively; do not cut, weld or drill on or near empty or full containers.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable under normal conditions - avoid oxidizing agents, heat, open flame.

Incompatibility: Strong oxidizers, heat and sources of ignition.

Hazardous Decomposition Products: Smoke, fumes, CO, CO₂

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastro-intestinal irritation, nausea, vomiting & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: N/A

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure to fresh air immediately. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water. Get medical attention if irritation persists. Use skin cream for defatted areas.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe damage. Do not leave victim unattended. If vomiting occurs, or if comatose or lethargic, place on the left side with the head down. Seek immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Large Spills: wear appropriate protective clothing. Stop source of leak if possible. Dike, contain spill and recover free liquid. Prevent entry into waterways. Soak up residue with an inert material such as clay, sand or other suitable materials; store and dispose of properly. Flush area with water. Where feasible and appropriate, remove contaminated soil. Small Spills: Neutralize and/or soak up spill with inert absorbent. Store in a closed container and dispose of properly.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses **Gloves:** Neoprene type gloves

Other Clothing and Equipment: N/A

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV. Greater than 60 cu ft/min. recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Icematic SW 68C

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Icematic SW 68C
Synonyms: Refrigeration Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4316-04

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Polyol Ester	131459-39-7	99%	Not listed	99%
Antioxidant Additive Package	n/a without non-disclosure agreement	<1%	Not listed	<1%

Contains no SARA 313 listed chemicals
VOC Content: 0.01lbs./gallon (1.0 %)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Negligible
Evaporation Rate: Negligible
Solubility in H₂O: Not soluble
Freezing Point °F: Not determined
Boiling Point °F: > 500°F
Specific Gravity H₂O=1 @25° C: 0.9800

Vapor Density (Air=1) 60-90° F: >5
VOC Content (% by wt.): Negligible
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Clear colorless liquid
Odor: Slight petroleum

IV - FIRE AND EXPLOSION

Flash Point F: >400°F (COC) **Flammable Limits:** N/D N/D

Extinguishing Media: Dry chemical, CO₂ Foam

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed container cool. Water spray may be used to flush spills away from exposure. Firefighters must use self-contained breathing apparatus. Prevent run-off from fire control from entering streams or drinking water supply.

Unusual Fire and Explosion Hazards: Empty containers may contain product residue or vapors which can ignite explosively; do not cut, weld or drill on or near empty or full containers.

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable under normal conditions - avoid oxidizing agents, heat, open flame.

Incompatibility: None

Hazardous Decomposition Products: Smoke, fumes, CO, CO₂

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Can cause gastrointestinal irritation, nausea, vomiting & diarrhea. EYES & SKIN: May cause mild irritation. Prolonged or repeated skin contact may cause skin irritation, defatting. INHALATION: May cause nasal/respiratory irritation, dizziness.

B. SUBCHRONIC, CHRONIC, OTHER: None

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: See acute effects above.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from area of exposure to fresh air immediately. Administer oxygen if deemed necessary. If breathing has stopped, administer CPR; keep person warm and at rest. Contact physician immediately.

EYES: Flush eyes with large amounts of clean water for at least 15 minutes. Contact a physician if irritation persists.

SKIN: Remove contaminated clothing. Wipe material from skin. Wash thoroughly with soap and water. If irritation persists, get medical attention. Wash clothing before reuse. Use skin cream for defatted areas.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything by mouth. Do not leave victim unattended. If vomiting occurs or if comatose or lethargic, place on the left side with head down. Consult a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Do not permit product to enter streams, sewers or other waterways. Dike spill and eliminate leak. Absorb with inert material and store in closed containers until disposal.

Waste Disposal Methods: All recovered material should be packaged, labelled, transported, and disposed of or reclaimed in conformance with good engineering practices. Dispose of by method in compliance with local, state and federal regulations regarding health, air and water pollution. May be destroyed by controlled incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH/MSHA Approved organic vapor respirator or supplied air respiratory equipment as required.

Eye Protection: Safety glasses **Gloves:** Neoprene type gloves

Other Clothing and Equipment: Impervious protective clothing and chemical-resistant safety shoes to minimize contact. Emergency shower and eye wash facility should be provided.

Ventilation: Provide sufficient mechanical, general and/or local exhaust to maintain exposure below TLV. Greater than 60 cu ft/min. recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Maintain ambient temperatures. Avoid prolonged/repeated breathing of vapors, mists, fumes. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation.

Additional Information: Do not wear contaminated clothing. Launder before re-use or discard. Do not take any food or drink, or handle tobacco products while in contact with this product. Wash thoroughly after use.

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 0
Specific Hazard

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Imperial Scale Remover

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Imperial Scale Remover
Synonyms: Sulfamic Acid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4360-84

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sulfamic Acid (ORAL LD50 - Rat 1600mg/kg)	5329-14-6	97	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Appreciable
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: N/A

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.):
pH @ 1% Solution: 1.25
pH as Distributed: N/A
Appearance: Purple flowing granules
Odor: Pungent odor

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable. In the event of fire, use water, chemical foam, dry chemical, CO₂.
Special Fire Fighting Procedures: Water solutions of this compound result in strong acids.
Unusual Fire and Explosion Hazards: May release SO₂, SO₃ or NH₃ gases if involved in a fire.

V - REACTIVITY DATA

Stability - Conditions to avoid: If heated releases SO₂, SO₃ or NH₃ gases.
Incompatibility: Alkali, chlorine sources (bleaches).
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes burns to both eyes and skin. INGESTION: Harmful if swallowed. Will burn mouth, throat and stomach. INHALATION: Irritates nose, throat and skin.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Call a physician.
EYES: Flush eyes with plenty of water for at least 15 minutes. Call a physician.
SKIN: Flush skin with plenty of water for at least 15 minutes. If irritation develops, call a physician.
INGESTION: DO NOT induce vomiting. Give large quantities of water. Give at least 1 ounce of milk of magnesia or aluminum hydroxide gel in equal amounts of water. If not available, the whites of 2 - 3 eggs may be used. Never give anything by mouth to an unconscious person. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Cautiously cover spill with bicarbonate of soda or soda ash - slaked lime mixture(50 - 50). Mix and flush to discharge using plenty of water in accordance with local, state and federal laws.

Waste Disposal Methods: Cautiously stir product waste in large volume of soda ash - slaked lime solution. Flush neutralized solution and discharge in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH - approved filter respirator recommended in case of dust.

Eye Protection: Goggles or face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: Wash protective clothing.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Keep from contact with chlorine bleaches. Wash thoroughly after handling. Keep container dry.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 1

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 1

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet IMS-II Ice Machine Sanitizer

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: IMS-II Ice Machine Sanitizer
Synonyms: Industrial Sanitizer
EPA Reg No. 1839-50-65516
EPA Est. No. 72026-IL-01

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4211

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Silicic Acid-Sodium Salt	1344-09-8	1.8	2.0mg/m3	N/A
Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	0.8	N/A	N/A
Alkyl Dimethyl Ethyl Benzyl Ammonium Chloride	68956-79-6	0.8	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: Like Water.
Specific Gravity H₂O=1 @25° C: 1.08

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): <5%
pH @ 100% Solution: 13.0
pH as Distributed: N/A
Appearance: Clear colorless liquid
Odor: Slight chemical odor.

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable or combustible. Use media appropriate for the primary source of fire.
Special Fire Fighting Procedures: Use caution when fighting any fire involving chemicals. Wear self-contained breathing apparatus in the event of a fire.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable.
Incompatibility: Strong acids or oxidizers. Do not mix with chlorinated detergents or sanitizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: This product may result in transient irritation of reddening on contact with eye. SKIN: (Primary Route of Exposure) Product may result in irritation upon contact with skin. INHALATION: Inhalation of concentrated mist or vapor may result in irritation of the nose, throat and lungs. INGESTION: Ingestion may cause nausea, vomiting, diarrhea and mucousal irritation.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: Flush eyes with water for at least 15 minutes and call a physician immediately.

SKIN: Wash affected areas with large amounts of soap and water. If irritation persists call a physician.

INGESTION: Do not induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safety stop spill at source. Contain spill by diking with soil or other inert material. Mop, pump or absorb with material and reclaim into sound containers for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. See label for specifics.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required.

Eye Protection: Chemical splash goggles. **Gloves:** Rubber gloves.

Other Clothing and Equipment: Rubber apron if splashing potential exists.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: DANGER! Do not expose product to excessive heat or near freezing temperatures. Handle all containers carefully. Triple rinse all empty containers to remove all residual product. Wash thoroughly after handling. Follow label directions as to storage and disposal.

Additional Information: None.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Insulation Cords & Slugs

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Insulation Cords & Slugs
Synonyms: Thumbing-Grade Insulation Material.

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4216

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
None				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: N/A	pH @ N/A Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: Soft, pliable, pressure sensitive material.
Specific Gravity H₂O=1 @25° C: 1.30 +/- .05 g/cc	Odor:

IV - FIRE AND EXPLOSION

Flash Point F: >450°F **Flammable Limits:** N/A
Extinguishing Media: Foam, CO₂, Dry Chemicals.
Special Fire Fighting Procedures: Water unsuited for rubber fires.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; High temperature yields decomposition to isobutene.
Incompatibility: Oxygen supplying chemicals and contact with acid clays at elevated temperatures.
Hazardous Decomposition Products: CO, CO₂, H₂O, and isobutene.
Conditions Contributing to Hazardous Polymerizations: May not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: N/A, EYES & SKIN: N/A
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: Flush with plenty of water.
SKIN: Flush with plenty of water.
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Repackage uncontaminated tape. Dispose of contaminated or unusable tape.
Waste Disposal Methods: Bury tape in an approved land fill site.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: N/A **Gloves:** N/A

Other Clothing and Equipment: N/A

Ventilation: N/A

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Prevent high temperature exposure.

Additional Information: None

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Kleen-n-Toss

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Kleen-n-Toss
Synonyms: Waterless Hand Cleaner Towel

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4230

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Adepsine Oil	8052-41-3	N/A	100ppm	100ppm
This product is not known to contain any compound in concentrating requiring reporting under SARA Title III, Section 313. All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A	Vapor Density (Air=1) 60-90° F: >1
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.):
Solubility in H₂O: Dispersible	pH @ 100% Solution: 8.25 +/- 0.5
Freezing Point °F: N/A	pH as Distributed:
Boiling Point °F: 212°	Appearance: Opaque white liquid saturated onto towels
Specific Gravity H₂O=1 @25° C: 0.97	Odor: Citrus (orange)

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** No data
Extinguishing Media: CO₂, dry chemical, foam, fog or water spray.
Special Fire Fighting Procedures: Keep containers cool and vapors down with water spray.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong oxidizers and acids
Hazardous Decomposition Products: CO, CO₂, H₂S, sulfur dioxide, smoke, soot
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: May cause irritation of throat or stomach, nausea, vomiting and diarrhea if swallowed. EYES: May cause irritation.
B. SUBCHRONIC, CHRONIC, OTHER: Pre-existing skin conditions may be aggravated.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: &

SKIN: Flush with water for 15 minutes, lifting eyelids. See a physician immediately.

INGESTION: Not a likely exposure route. If a large quantity of liquid is swallowed, do not induce vomiting. Call a physician or poison center immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Caution: slip hazard. Wipe up small releases with a dry absorbent. For large releases, prevent material from entering sewers or drains.

Waste Disposal Methods: Consult local, state or federal regulations. Discard empty container.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None

Eye Protection: None **Gloves:** None

Other Clothing and Equipment: Not usually necessary.

Ventilation: Nothing special usually needed.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: For external use only. Do not allow to contact eyes. Do not smoke while using - not for use around mouth or eyes.

Additional Information: Follow label directions. Keep away from heat sources. Keep out of reach of children. Keep container tightly sealed.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Liquid Ice Machine Cleaner

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Liquid Ice Machine Cleaner
Synonyms: Phosphoric Acid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4207

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Phosphoric Acid* (ORAL LD50 1530 mg/kg) (DERMAL LD50 2740mg/kg) *STEL=3mg/m3 # Ingredient subject to reporting under section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.	7664-38-2	75	1mg/m3	1mg/m3

III - PHYSICAL DATA

Vapor Pressure: 0.03
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: @500
Specific Gravity H₂O=1 @25° C: 1.584

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 15 - 25
pH @ N/A Solution: N/A
pH as Distributed: <1
Appearance: Clear liquid
Odor: Odorless

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable or combustible.
Special Fire Fighting Procedures: Exercise caution when fighting fires involving chemicals. Respiratory protection is essential--wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Contact with some metals may form hydrogen gas. Avoid using in confined, unventilated spaces.

V - REACTIVITY DATA

Stability - Conditions to avoid: Unknown.
Incompatibility: Strong caustics, metals and reducing agents.
Hazardous Decomposition Products: Phosphoric acid fumes; phosphorus oxide fumes; hydrogen gas.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Corrosive. Concentrated solutions are extremely irritating to eyes and may produce burns on contact. SKIN: Corrosive to tissues. May result in skin burns. Severely irritating to skin; repeated contact with more dilute solutions may result in dermatitis. INHALATION: Mist, vapors or aerosols are irritating to respiratory tract and high concentrations may produce pulmonary edema and difficulty in breathing. INGESTION: If swallowed may result in abdominal hemorrhage, nausea, vomiting or loss of consciousness. Severe abdominal pain may result from severe burns of stomach and gastrointestinal tract.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical aid.

EYES: Immediately flush with plenty of water for at least 15 minutes. Seek medical aid.

SKIN: Immediately wash with soap and plenty of water for 15 minutes while removing contaminated clothing. Seek medical aid.

INGESTION: DO NOT induce vomiting. Give large quantities of water. Seek medical aid. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb on vermiculite or other suitable material and place in a container for disposal.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: For vapor or mist exposure, use NIOSH-approved respirator.

Eye Protection: Full face shield or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: Rubber apron and boots.

Ventilation: Local and mechanical exhaust recommended. Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: DANGER! Do not get in eyes, on skin or clothing. Wear chemical splash goggles or face shield, rubber gloves, protective clothing when handling. Harmful if swallowed or inhaled. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed when not in use.

Additional Information: Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations. Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Liquid Ice Machine Cleaner - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Liquid Ice Machine Cleaner - Canada
Synonyms: Phosphoric Acid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4834

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Phosphoric Acid* (ORAL LD50 1530 mg/kg) (DERMAL LD50 2740mg/kg) *STEL=3mg/m3 # Ingredient subject to reporting under section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.	7664-38-2	75	1mg/m3	1mg/m3

III - PHYSICAL DATA

Vapor Pressure: 0.03
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: @500
Specific Gravity H₂O=1 @25° C: 1.584

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 15 - 25
pH @ N/A Solution: N/A
pH as Distributed: <1
Appearance: Clear liquid
Odor: Odorless

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is not flammable or combustible.
Special Fire Fighting Procedures: Exercise caution when fighting fires involving chemicals. Respiratory protection is essential--wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Contact with some metals may form hydrogen gas. Avoid using in confined, unventilated spaces.

V - REACTIVITY DATA

Stability - Conditions to avoid: Unknown.
Incompatibility: Strong caustics, metals and reducing agents.
Hazardous Decomposition Products: Phosphoric acid fumes; phosphorus oxide fumes; hydrogen gas.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Corrosive. Concentrated solutions are extremely irritating to eyes and may produce burns on contact. SKIN: Corrosive to tissues. May result in skin burns. Severely irritating to skin; repeated contact with more dilute solutions may result in dermatitis. INHALATION: Mist, vapors or aerosols are irritating to respiratory tract and high concentrations may produce pulmonary edema and difficulty in breathing. INGESTION: If swallowed may result in abdominal hemorrhage, nausea, vomiting or loss of consciousness. Severe abdominal pain may result from severe burns of stomach and gastrointestinal tract.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical aid.

EYES: Immediately flush with plenty of water for at least 15 minutes. Seek medical aid.

SKIN: Immediately wash with soap and plenty of water for 15 minutes while removing contaminated clothing. Seek medical aid.

INGESTION: DO NOT induce vomiting. Give large quantities of water. Seek medical aid. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb on vermiculite or other suitable material and place in a container for disposal.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: For vapor or mist exposure, use NIOSH-approved respirator.

Eye Protection: Full face shield or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: Rubber apron and boots.

Ventilation: Local and mechanical exhaust recommended. Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: DANGER! Do not get in eyes, on skin or clothing. Wear chemical splash goggles or face shield, rubber gloves, protective clothing when handling. Harmful if swallowed or inhaled. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed when not in use.

Additional Information: Use only in well ventilated areas that will maintain air levels below limits established by federal, state and local regulations. Read and observe all labeled precautions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Liquid Scale Dissolver

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Liquid Scale Dissolver
Synonyms: Acidic Solution

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4330

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Hydrochloric Acid (ORAL LD50 - Rabbit 900mg/kg)	7647-01-0	26	5ppm (ceiling)	5ppm
Water	7732-18-5	74		

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1): Not Applicable
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: >212°
Specific Gravity H₂O=1 @25° C: 1.095 - 1.125

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 100
pH @ Solution: N/A
pH as Distributed: <1
Appearance: Clear orange-color liquid.
Odor: Sharp odor.

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable. Use water spray to cool fire.
Special Fire Fighting Procedures: In the event of fire, wear full protective clothing and NIOSH - approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: NOTE: This product can react with metals to release hydrogen gas. Firemen may need to protect against this.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Bases, strong oxidizers and metals.
Hazardous Decomposition Products: Contact with metals may generate Hydrogen, which can be explosive.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Corrosive to tissues. Causes burns to eyes and skin. INGESTION: Harmful if swallowed. Burns to mouth, throat and stomach are likely. INHALATION: Mists may cause coughing and irritation to respiratory tract.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air and contact a physician.

EYES: &

SKIN: In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material as possible. Cover with sodium bicarbonate or soda ash and flush with water.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: A NIOSH - approved respirator for acids is recommended.

Eye Protection: Full face shield or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective clothing.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Wash thoroughly after handling. Keep from contact with chlorine bleaches.

Additional Information: Do not use this product to clean unvented systems. Carbon dioxide gas released in the cleaning process may build pressure in system causing rupture or explosion.

NFPA

Health Hazard: 3

Fire Hazard.....: 0

Reactivity: 1

Specific Hazard:

HMIS RATING

Health Hazard..... : 3

Fire Hazard : 0

Reactivity : 1

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Liquid Scale Dissolver - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Liquid Scale Dissolver - Canada
Synonyms: Acidic Solution

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4845

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Hydrochloric Acid (ORAL LD50 - Rabbit 900mg/kg)	7647-01-0	26	5ppm (ceiling)	5ppm
Water	7732-18-5	74		

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown
Evaporation Rate: (ether=1): Not Applicable
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: >212°
Specific Gravity H₂O=1 @25° C: 1.095 - 1.125

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): 100
pH @ Solution: N/A
pH as Distributed: <1
Appearance: Clear orange-color liquid.
Odor: Sharp odor.

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable. Use water spray to cool fire.
Special Fire Fighting Procedures: In the event of fire, wear full protective clothing and NIOSH - approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: NOTE: This product can react with metals to release hydrogen gas. Firemen may need to protect against this.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Bases, strong oxidizers and metals.
Hazardous Decomposition Products: Contact with metals may generate Hydrogen, which can be explosive.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Corrosive to tissues. Causes burns to eyes and skin. INGESTION: Harmful if swallowed. Burns to mouth, throat and stomach are likely. INHALATION: Mists may cause coughing and irritation to respiratory tract.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air and contact a physician.

EYES: &

SKIN: In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material as possible. Cover with sodium bicarbonate or soda ash and flush with water.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: A NIOSH - approved respirator for acids is recommended.

Eye Protection: Full face shield or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective clothing.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Wash thoroughly after handling. Keep from contact with chlorine bleaches.

Additional Information: Do not use this product to clean unvented systems. Carbon dioxide gas released in the cleaning process may build pressure in system causing rupture or explosion.

NFPA

Health Hazard: 3

Fire Hazard.....: 0

Reactivity: 1

Specific Hazard:

HMIS RATING

Health Hazard..... : 3

Fire Hazard : 0

Reactivity : 1

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Micromet Crystals

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Micromet Crystals
Synonyms: Polyphosphate Glass

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4243

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communications Standard, (29CFR 1910.1200), this product contains no hazardous ingredients. All ingredients are TSCA listed.	N/A	N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: Solid	Vapor Density (Air=1) 60-90° F: Solid
Evaporation Rate: (ether=1) N/A	VOC Content (% by wt.): Solid
Solubility in H₂O: Complete	pH @ 1% Solution: 7.0 - 7.5
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Solid	Appearance: Clear glassy material
Specific Gravity H₂O=1 @25° C: Solid	Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None known

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.
Incompatibility: Strong oxidizer.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Results from acute toxicity testing show that the material would not be considered toxic as defined by the CPSC protocol. However, product has sharp edges which can cause skin abrasions.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: Wash affected area thoroughly. Contact a physician if irritation develops.
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and dispose of with other solid wastes. Product is slippery when wet.

Waste Disposal Methods: Disposal of product should be adherence with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Normally not required. **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Micromet Plates

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Micromet Plates
Synonyms: Polyphosphate Glass

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4275

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communications Standard, (29CFR 1910.1200), this product contains no hazardous ingredients. All ingredients are TSCA listed.	N/A	N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: Solid
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: Solid
Specific Gravity H₂O=1 @25° C: Solid

Vapor Density (Air=1) 60-90° F: Solid
VOC Content (% by wt.): Solid
pH @ 1% Solution: 7.0 - 7.5
pH as Distributed: N/A
Appearance: Clear glassy material
Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.
Incompatibility: Strong oxidizer.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Results from acute toxicity testing show that the material would not be considered toxic as defined by the CPSC protocol. However, product has sharp edges which can cause skin abrasions.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: Wash affected area thoroughly. Contact a physician if irritation develops.
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and dispose of with other solid wastes. Product is slippery when wet.

Waste Disposal Methods: Disposal of product should be in adherence with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Normally not required. **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Nickel-Safe Ice Machine Cleaner

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nickel-Safe Ice Machine Cleaner
Synonyms: Descaler for nickel-plated ice machines

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4287

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
phosphoric acid	7664-38-2	<30	1mg/m3	1mg/m3
citric acid	77-92-9	<5	ne	ne

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: 0
Boiling Point °F: >200°F
Specific Gravity H₂O=1 @25° C: 1.188

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): ~30
pH @ 1% Solution: ~2.0
pH as Distributed: < 1
Appearance: Green liquid
Odor: Mild chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: None **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable or combustible.
Special Fire Fighting Procedures: None known.
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable, none known.
Incompatibility: Strong bases, ammonia, chlorine bleach.
Hazardous Decomposition Products: Forced ignition of dried residues may produce oxides of phosphorus.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Severely irritating to eyes on contact. May cause burns. (Primary Route of Exposure) SKIN: Causes severe irritation. May cause burns on prolonged contact. INHALATION: Mists irritating to upper respiratory tract. INGESTION: Severely irritating to mouth, throat and stomach.

B. SUBCHRONIC, CHRONIC, OTHER: None known.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

SKIN: Flush skin with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

INGESTION: Do NOT induce vomiting. Give 1 or 2 glasses of water to dilute. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills may be mopped up and residues flushed to drain with water. Rinse mop before storing. Neutralize with dilute solution of soda ash.

Waste Disposal Methods: Unused material is corrosive waste (D002). Used material may be sewered in accordance with all applicable regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required.

Eye Protection: Splash goggles. **Gloves:** Rubber gloves.

Other Clothing and Equipment: None normally required.

Ventilation: Good general ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: This product will withstand an occasional accidental freezing without loss of performance. Thaw and remix before use.

Additional Information: This is a complete product. Do not add or mix with other chemicals.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Nickel-Safe Ice Machine Cleaner - Canada

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nickel-Safe Ice Machine Cleaner - Canada
Synonyms: Descaler for nickel-plated ice machines

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4841

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
phosphoric acid	7664-38-2	<30	1mg/m3	1mg/m3
citric acid	77-92-9	<5	ne	ne
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: Complete
Freezing Point °F: 0
Boiling Point °F: >200°F
Specific Gravity H₂O=1 @25° C: 1.188

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): ~30
pH @ 1% Solution: ~2.0
pH as Distributed: < 1
Appearance: Green liquid
Odor: Mild chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: None **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable or combustible.
Special Fire Fighting Procedures: None known.
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable, none known.
Incompatibility: Strong bases, ammonia, chlorine bleach.
Hazardous Decomposition Products: Forced ignition of dried residues may produce oxides of phosphorus.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Severely irritating to eyes on contact. May cause burns. (Primary Route of Exposure) SKIN: Causes severe irritation. May cause burns on prolonged contact. INHALATION: Mists irritating to upper respiratory tract. INGESTION: Severely irritating to mouth, throat and stomach.

B. SUBCHRONIC, CHRONIC, OTHER: None known.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

SKIN: Flush skin with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

INGESTION: Do NOT induce vomiting. Give 1 or 2 glasses of water to dilute. Get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills may be mopped up and residues flushed to drain with water. Rinse mop before storing. Neutralize with dilute solution of soda ash.

Waste Disposal Methods: Unused material is corrosive waste (D002). Used material may be sewered in accordance with all applicable regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not normally required.

Eye Protection: Splash goggles. **Gloves:** Rubber gloves.

Other Clothing and Equipment: None normally required.

Ventilation: Good general ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: This product will withstand an occasional accidental freezing without loss of performance. Thaw and remix before use.

Additional Information: This is a complete product. Do not add or mix with other chemicals.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet No. 340 Liquid Scale Inhibitor

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: No. 340 Liquid Scale Inhibitor
Synonyms: Phosphonate Glycol Mixture

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4340

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Ethylene Glycol (ORAL LD50 - Rat 8540mg/kg) # Ingredient subject to reporting under Section 313 of Title III (SARA) and 40 CFR 372. All ingredients are TSCA listed.	107-21-1	13	50ppm (ceiling)	50ppm (ceiling)

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like water
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: >212°
Specific Gravity H₂O=1 @25° C: 1.25

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): @70
pH @ Solution: N/A
pH as Distributed: 8.5
Appearance: Clear, colorless liquid
Odor: Chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: Always use suitable equipment for fighting chemical fires. A self-contained breathing apparatus and impervious clothing.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes irritation to both eyes and skin. INGESTION: Harmful if swallowed. Large quantities will cause upset to stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: &

SKIN: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water.

INGESTION: If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area, contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in a sealed metal container for disposal.

Waste Disposal Methods: Landfill or mix with a flammable solvent and incinerate in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required unless the TLV for ethylene glycol is exceeded.

Eye Protection: Goggles or safety glasses. **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling. Use with adequate ventilation.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

No. 85 Algaecide

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: No. 85 Algaecide
Synonyms: Microbiocide
EPA Regis. No. 1448-233-65516
EPA Est. No. 1459-IL-01

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4108

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Poly{ oxyethylene (dimethylimino) ethylene (dimethyliminio) ethylene dichloride}	31075-24-8	30	N/A	N/A

ORAL LD50 Rat 3690 mg/kg
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown	Vapor Density (Air=1) 60-90° F: like H ₂ O
Evaporation Rate: (ether=1) N/AV	VOC Content (% by wt.): 70
Solubility in H₂O: Complete	pH @ Solution: N/A
Freezing Point °F: N/AV	pH as Distributed: 6.5
Boiling Point °F: above 212	Appearance: Clear, slightly viscous liquid
Specific Gravity H₂O=1 @25° C: 1.075	Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: >275°F (TOC) **Flammable Limits:** N/A
Extinguishing Media: Foam, CO₂, dry chemical.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None.
Incompatibility: Strong bases, strong acids.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Testing of the active ingredient in rabbits produced only slight skin irritation and minimal transient ocular irritation. INGESTION: Harmful if swallowed. May cause upset to stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: In case of contact, flush with cool water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush with cool water for at least 15 minutes. If irritation develops, call a physician.

INGESTION: If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dike area to contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed container for disposal.

Waste Disposal Methods: Keep container closed when not in use. Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. This container must be triple rinsed (or equivalent) and offered for recycling, reconditioning or disposal in an approved landfill. Rinsate that cannot be used or reprocessed should be disposed of in a landfill for pesticides. Open dumping is prohibited.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Eye goggles or safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: None.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: This pesticide is toxic to fish. Keep out of lakes, streams or ponds. Permits may be required for discharges containing this pesticide into lakes, streams ponds or public water. For guidance, contact the regional office of the EPA.

Additional Information: Avoid contact with the eyes, skin or clothing. Keep container closed. Wash thoroughly after handling. Avoid breathing vapors.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

No. 90 Algaecide

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: No. 90 Algaecide
Synonyms: Cooling Water Microbiocide
EPA Regis. No. 5185-420-65516
EPA Est. No. 5185-MI-1

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4109

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
1-Bromo-3-Chloro-5, 5-Dimethylhydantoin ORAL LD50 Rat>200 mg/kg All ingredients are TSCA listed.	16079-88-2	96	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Solid
Evaporation Rate: (ether=1) N/A
Solubility in H₂O: 0.15g/100g in H₂O
Freezing Point °F: N/AV
Boiling Point °F: Solid
Specific Gravity H₂O=1 @25° C: Solid

Vapor Density (Air=1) 60-90° F: Solid
VOC Content (% by wt.): Solid
pH @ Solution: Unknown
pH as Distributed: N/A
Appearance: White compressed tablets
Odor: Strong halogen odor

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Water.

Special Fire Fighting Procedures: If involved in a fire, hydrogen bromide or bromine may be released. Exercise caution when fighting any chemical fire. Respiratory protection is essential. In large fires, product may smolder for prolonged periods emitting a dense black smoke.

Unusual Fire and Explosion Hazards: Product is a strong oxidizing agent. Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, hazardous gases and possible fire and explosion. In case of contamination or decomposition do not reseal container. If possible, isolate container in open air or well ventilated area. If necessary, flood with large volume of water.

V - REACTIVITY DATA

Stability - Conditions to avoid: Do not mix with anything but water.

Incompatibility: Organics and strong reducing agents.

Hazardous Decomposition Products: Fires may release hydrogen bromide or bromine.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYE & SKIN: Corrosive to tissues. Direct contact causes severe eye irritation. Can cause irreversible eye damage. Remove and wash all contaminated clothing before reuse.

INHALATION: Irritating to nose and throat. **INGESTION:** Poisonous, may be fatal if swallowed.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Contact a physician, if irritation persists.

EYES: In case of contact, flush eyes copiously with water for at least 15 minutes and get medical attention.

SKIN: After handling, wash hands thoroughly.

INGESTION: If swallowed, drink raw egg whites, milk or mucilage, follow with emetic (tablespoon of mustard in glass of warm water).

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dispose of in accordance with federal, state and local regulations. Sweep up spilled material and repackage. Wash area of spill with large amounts of water.

Waste Disposal Methods: PESTICIDE DISPOSAL: Pesticide, spray mixture, or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides. CONTAINER DISPOSAL: Dispose of in an incinerator or landfill approved for pesticide containers. Do not reuse empty container. GENERAL: Consult federal, state or local disposal authorities for approved alternative procedures.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Dust mask essential where dusting may occur.

Eye Protection: Eye goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective clothing.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Keep container closed. Keep out of reach of children. After handling, wash hands thoroughly. Do not breathe dusts. Store in a cool, dry area away from fire or flame.

Additional Information: Mix only with water. Use clean, dry utensils and equipment. Do not mix with other chemicals. Such use may cause violent reaction.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 2

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 2

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Nu-Blast

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nu-Blast
Synonyms: Aerosol cleaner/degreaser

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4290

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Trichloroethylene*	79-01-6	>50	50 ppm	50 ppm
Carbon Dioxide	124-38-9	> 5	5000 ppm	5000 ppm

*This is a SARA III listed ingredient. WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 85-100psig @70°F
Evaporation Rate: (n-butyl acetate=1) = 2.6
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.45

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): 100
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: Clear, colorless spray
Odor: lemon-scented solvent

IV - FIRE AND EXPLOSION

Flash Point F: None **Flammable Limits:** None
Extinguishing Media: Foam, dry chemical, carbon dioxide
Special Fire Fighting Procedures: Self-contained breathing apparatus
Unusual Fire and Explosion Hazards: Keep at room temperature. Do not expose to temperatures above 130°F

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; open flames, welding arcs, heat
Incompatibility: Reactive metals, magnesium, strong oxidizing agents. Product may react with aluminum if immersed in liquid concentrate trichloroethylene for extended periods.
Hazardous Decomposition Products: CO, CO₂, HCL, small amounts of phosgene and chlorine
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Possible chemical pneumonitis if aspirated into lungs, nausea. INHALATION: Excessive inhalation of vapor can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness. EYE CONTACT: Irritation. SKIN CONTACT: Irritation due to defatting of skin

B. SUBCHRONIC, CHRONIC, OTHER: (Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung, or brain damage, cardiac abnormalities.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove person to fresh air. Resuscitate if necessary. GET MEDICAL ATTENTION.

EYES: Flush with water for at least 15 minutes. If irritated, seek medical attention.

SKIN: Wash with soap and water. If irritated, seek medical attention.

INGESTION: Call physician immediately. Do not induce vomiting. Drink two large glasses of water.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb with suitable medium. incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosols can when vented to atmospheric pressure through normal use, pose no disposal hazard.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If vapor concentration exceeds TLV, use respirator approved by NIOSH/MSHA for organic matter

Eye Protection: Safety glasses **Gloves:** Neoprene

Other Clothing and Equipment: None

Ventilation: Provide local exhaust ventilation in volume and pattern to keep TLV of all hazardous ingredients in section II below acceptance limit.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store above 130°F. Do not puncture or incinerate.

Additional Information: Keep out of the reach of children. Avoid food contamination. Avoid inhalation of vapors.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Nu-Brite

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nu-Brite
Synonyms: Alkaline Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4291

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide (Caustic Soda)	1310-73-2	>20	2mg/M3 Ceiling	

VOC Content: 2.8%
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Not Determined
Evaporation Rate: (ether=1) Same as H₂O
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 212°F
Specific Gravity H₂O=1 @25° C: 1.252 +/- 0.005

Vapor Density (Air=1) 60-90° F: Unknown
VOC Content (% by wt.): N/A
pH @ 10% Solution: 13.2
pH as Distributed: 14.0
Appearance: Clear, colored Liquid
Odor: No Distict Odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Water spray (Fog); Dry chemical; CO₂; Foam
Special Fire Fighting Procedures: Do not enter confined fire-spaces without protective clothing and self-contained air supply.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach)
Hazardous Decomposition Products: Burning may produce carbon monoxide and/or carbon dioxide.
Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYE, SKIN, ORAL: Corrosive material. Will cause burns of skin and eyes with prolonged contact. Eye damage likely if contact is prolonged. Generated mists may be seriously irritating and cause damage to respiratory tract if swallowed. Harmful or fatal if swallowed. May cause severe burns of mucous membranes, stomach, nausea, vomiting - possible internal damage.
B. SUBCHRONIC, CHRONIC, OTHER: Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

EYES: &

SKIN: Flush eyes with water for at least 15 minutes and call a physician immediately. Skin: Wash affected area with large amounts of soap and water. If irritation persists call physician.

INGESTION: Do not induce vomiting. Dilute by drinking water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by diking with soil or other inert material and CAREFULLY neutralize with dilute acid. Mop, pump or absorb with inert material and reclaim into sound containers for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. Keep non-neutralized material out of sewers, storm drains, surface water and soil.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH approved respirator where mists or sprays may be generated. (Caustic mist cartridge type)

Eye Protection: Chemical goggles, face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective clothing to minimize contact (boots, apron, faceshield)

Ventilation: Product is intended for outdoor use.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Corrosive Material - Handle All Containers Carefully. Wash thoroughly after handling. Keep containers closed when not in use. Avoid contact with leather or wool.

Additional Information: None

NFPA

Health Hazard: 3

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 3

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Nu-Foam

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nu-Foam
Synonyms: Insulating Sealant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4293

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Methylene bisphenyl isocyanate**	101-68-8	3-6	.005ppm	0.02 ppm
Polymethylene polyphenyl isocyanate	9016-87-9	41-44	NE*	NE*
Chlorinated Phosphate	13674-84-5	10-12	NE*	NE*
Dimethylether	115-10-6	1-3	NE*	NE*
Propane	74-98-6	3-6	1000 ppm	1000 ppm
Isobutane	75-28-5	7-6	NE*	NE*
Polyether Polyol	Mixture	22-33	NE*	NE*

* Not established

** This compound is a toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 82.0 psig @ 70°F
Evaporation Rate: NE*
Solubility in H₂O: N/A
Freezing Point °F: NE*
Boiling Point °F: -43.7°F (-42°C)
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: Heavier than air
VOC Content (% by wt.): NE*
pH @ Solution: NE*
pH as Distributed: NE*
Appearance: Gel under pressure.
Odor: Hydrocarbon odor.

IV - FIRE AND EXPLOSION

Flash Point F: Estimated -156°F **Flammable Limits:** 1.8% Lower 10% Upper
Extinguishing Media: Water fog; foam; CO₂; dry chemical.
Special Fire Fighting Procedures: Wear full self-contained breathing apparatus and full protective clothing.
Unusual Fire and Explosion Hazards: Avoid storage temperatures above 120°F to prevent can explosions. Avoid water contamination in closed container.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable under normal storage and handling conditions - Do not store above 100°F or in auto or direct sunlight; cured foam will deteriorate when exposed to UV light.
Incompatibility: Water, alcohol, strong bases, finely powdered metal such as aluminum, magnesium or zinc, and strong oxidizers.
Hazardous Decomposition Products: Contamination with water may form CO₂.
Conditions Contributing to Hazardous Polymerizations: Contamination with water may form CO₂. Avoid high heat (flames, extremely hot metal surfaces, heating elements, combustion engines, etc.). Do not store in auto or direct sunlight.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYE contact with MDI may result in conjunctival irritation and mild corneal opacity. SKIN contact may result in dermatitis, either irritative or allergic. INHALATION of MDI vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Air-borne overexposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed. Gastrointestinal symptoms include nausea, vomiting and abdominal pain. Polyurethane resin forms a quick bond with skin. Cured foam is hard to remove from skin. May cause eye damage.

B. SUBCHRONIC, CHRONIC, OTHER: Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic symptoms of the lower respiratory tract (asthma-like), including wheezing, shortness of breath and difficulty breathing. Subsequent reactions may occur at or substantially below the PEL and TLV. Asthma caused by isocyanates, including MDI, may persist in some individuals after removal from exposure and may be irreversible. Some isocyanate sensitized persons may experience asthma reactions upon exposure to non-isocyanate containing dusts or irritants. Cross sensitization to different isocyanates may occur. Long-term overexposure to isocyanates has also been reported to cause lung damage, including reduced lung function, which may be permanent. An animal study indicated that MDI may induce respiratory hypersensitivity following dermal exposure.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Breathing difficulties, chest discomfort, headache, eye and nose membrane irritation.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give oxygen. If not breathing, give artificial respiration. Keep victim quiet. Do not give stimulants. Get immediate medical attention.

EYES: In case of eye contact, flush with water for 15 minutes. Get immediate medical attention.

SKIN: If frostbitten, warm skin slowly with water; otherwise, wash affected areas with soap and water. Remove wet foam immediately from skin with acetone or nail polish remover. If foam dries on skin, apply generous amounts of petroleum jelly or lanolin, leave on for one hour, wash thoroughly, and repeat process until foam is removed. Do not attempt to remove dried foam with solvents.

INGESTION: In case of ingestion, get immediate medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: If can ruptures, protect area from heat, sparks, flames, or static electricity. Turn off sources of ignition. Vapors are heavier than air. Make sure area is adequately ventilated. Allow foaming process to complete; then dispose according to federal, state and local regulations.

Waste Disposal Methods: Waste: Dispose of cured foam per federal, state and local regulations. Container: Dispose according to federal, state and local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not Applicable

Eye Protection: Safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Wear gloves and safety glasses. Use in well ventilated areas only. See section IV.

Ventilation: Maintain local exhaust rate to keep below TLV.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Always store upright between 0 °F(min) and 100° F(max). Do not store in sunlight.

Additional Information: (Carcinogenicity) Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at 6 mg/m3, the highest dose tested. This is well above the recommended TLV of 5 ppb (0.05 mg/m3). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m3.

NFPA

Health Hazard: 1
Fire Hazard.....: 4
Reactivity: 1
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 4
Reactivity: 1
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Nu-Klean II

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Nu-Klean II
Synonyms: Waterless Hand Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4194

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Adepsine Oil	8012-95-1		5 mg/m3	5mg/m3 mis
d'Limonen	5988-27-5		NE	NE
9-Octadecenoic Acid	112-80-1		NE	NE
Clay	1317-66-3		10mg/m3	15mg/m3 dust
Pumice	60676-86-0		NE	15mg/m3 dust

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/AV
Boiling Point °F: 212°
Specific Gravity H₂O=1 @25° C: 0.95

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.):
pH @ Solution: N/A
pH as Distributed: 8.3
Appearance: Orange gel
Odor: Citrus

IV - FIRE AND EXPLOSION

Flash Point F: None to Boiling **Flammable Limits:** No Data
Extinguishing Media: Does not support combustion.
Special Fire Fighting Procedures: Keep containers cool and vapors down with water spray.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong acids, bases, oxidizers and selected amines.
Hazardous Decomposition Products: CO₂, CO, hydrogen bromide, nitrous oxides and ammoniacal compounds.
Conditions Contributing to Hazardous Polymerizations: None, will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Harmful if swallowed. May cause blindness. EYES: May cause irritation.

B. SUBCHRONIC, CHRONIC, OTHER: Ingestion: May irritate gastrointestinal tract. Pre-existing skin disorders.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Get to fresh air.

EYES: Flush with plenty of water for 15 minutes, lifting eyelids to insure complete rinsing. Get medical attention.

SKIN: N/A

INGESTION: Rinse mouth, drink plenty of water. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Caution - slip hazard. Wipe up or scoop product for reuse, or put in suitable container for disposal. Rinse residuals with water.

Waste Disposal Methods: Consult local, state & federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required

Eye Protection: Safety glasses **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: Mechanical General.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep from freezing. Store in cool, dry location. Replace lid when not in use or use follow-plate. Wash or wipe skin after use. Avoid contact with eyes. Do not swallow.

Additional Information: Follow label directions. Keep out of reach of children. Keep container tightly sealed when not in use. Do not contaminate water, food, or feed by use or storage.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Odor-Free Deodorant Towels

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Odor-Free Deodorant Towels
Synonyms:

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4294

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
1-Butoxyl-2-Propanol ab	10215-33-5	<4	N/E	N/E
Synthetic isoparaffinic hydrocarbon	64742-47-8	<92	N/E	N/E

a: On CERCLA list of Hazardous Substances and Reportable Quantities (40CFR 302.4)
b: On SARA Title III List of Toxic Chemicals subject to release reporting (Community Right to Know 40CFR 372)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 0.798

Vapor Density (Air=1) 60-90° F:
VOC Content (% by wt.): <10
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: White cloth
Odor: Vanilla

IV - FIRE AND EXPLOSION

Flash Point F: 162°F (concentrate[closed cup]). **Flammable Limits:**
Extinguishing Media: Water, foam, dry chemical, CO₂.
Special Fire Fighting Procedures: Firefighters should be equipped with full protective gear including breathing apparatus.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: stable - none known.
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: None.
Conditions Contributing to Hazardous Polymerizations: None.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: mild irritation and redness. SKIN: Irritation dryness with prolonged contact.
B. SUBCHRONIC, CHRONIC, OTHER: None.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush eyes and under eye lids with plenty of cool water for at least 15 minutes. Obtain medical attention if irritation persists.

SKIN: Flush area with soap and water.

INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Remove all sources of ignition and ventilate area. Soak up spilled material with inert absorbent material and collect loose towels.

Waste Disposal Methods: Consult local authorities.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Not required **Gloves:** Not required

Other Clothing and Equipment: Not required

Ventilation: Not required

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool dry place. Keep container tightly closed when stored.

Additional Information: Keep out of the reach of children

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 2

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Oxine

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Oxine
Synonyms: Sanitize and Deodorize

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4295-12

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Chlorite		3.35	N/A	N/A
Chlorine Dioxide		0.1	0.1	0.1
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: 23.7 mm Hg (25°C)
Evaporation Rate: Comparable to water
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 213°F (100°C)
Specific Gravity H₂O=1 @25° C: 1.03 g/ml

Vapor Density (Air=1) 60-90° F: 0.02 kg/m
VOC Content (% by wt.):
pH @ Solution:
pH as Distributed:
Appearance: Clear liquid
Odor: Very faint chlorinous odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Water unless contraindicated by other material involved in fire.
Special Fire Fighting Procedures: Do not allow Oxine solutions to evaporate to dryness. If chlorine dioxide gas is produced, vent atmosphere. Open or vent any large container of Oxine
Unusual Fire and Explosion Hazards: The sodium chlorite in dried Oxine is a strong oxidizer, which supports combustion. Chlorine dioxide, which may evolve from Oxine solutions, is explosive in the gaseous phase at concentrations greater than 10% by volume. Do not allow chlorine dioxide gas to accumulate within a confined space

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is Stable. Avoid storing product under conditions in which it could evaporate to crystalline salt.
Incompatibility: Avoid accidental contact with acids, chlorine compounds, hypochlorites (bleach), sulfur and sulfite compounds, phosphorus, organic solvents, and combustible/flammable materials
Hazardous Decomposition Products: Exposure to acids or chlorine compounds can produce uncontrolled generation of chlorine dioxide gas
Conditions Contributing to Hazardous Polymerizations: Does not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Rat Oral LD50: 4.360 mg/Kg. Ingestion may produce gastric discomfort, nausea, vomiting and diarrhea. Intake of large quantities may produce methemoglobinemia. EYES: Based upon rabbit studies, product has been given an EPA Category III rating as a mild irritant. Exposure can produce slight irritation of conjunctiva, cornea and eyelid. SKIN: Based on rabbit studies, product is listed as "practically not an irritant". Prolonged exposure may produce localized irritation, contact dermatitis, mild erythema and edema. It is highly unlikely to be absorbed through the skin in toxic amounts. Rabbit Acute Dermal LD50 > 2,020 mg/Kg. INHALATION: Acute inhalation: LC50 > 5.61 mg/L. Prolonged inhalation of fog or mist containing Oxine may be irritating to nose and throat.

B. SUBCHRONIC, CHRONIC, OTHER: May cause localized irritation to areas exposed to product

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Skin disorder, such as dermal allergies and dermatitis. Exposure to chlorine dioxide produced by activation can aggravate pulmonary disorders, such as emphysema

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Unactivated Oxine normally has no respiratory effects. If exposure to chlorine dioxide produced from activation occurs, remove victim to fresh air. Contact a physician if respiratory distress continues

EYES: Flush eyes thoroughly with water, making certain eyelids are held open. If irritation or burning persists, seek medical attention

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and rinse thoroughly with water before laundering or discard. If irritation occurs, seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. Contact a physician or Poison Control center immediately

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills, involving less than 10 gallons, may be flushed to a designated and permitted sewer system with copious amount of water. Larger spills should be contained and neutralized with sodium bisulfite or sodium thiosulfate (1.2 lbs neutralizer per each estimated lb. of spilled material) or disposed of as chemical waste in a manner indicated below. At no time should the spilled material be allowed to dry to a crystalline salt.

Waste Disposal Methods: Small quantities, less than 10 gallons, may be flushed to an authorized and designated sewer with copious amount of water.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Fogging or spraying applications may require worker respiratory protection such as: NIOSH/MSHA approved air-purifying respirators or NIOSH/MSHA approved canister/cartridge facial respirators rated for chlorine/acid vapors or specified for chlorine dioxide.

Eye Protection: Use of chemical safety goggles for all applications involving chemical handling **Gloves:** Rubber, neoprene or other chemically impervious gloves be worn for all applications

Other Clothing and Equipment: Protective clothing to minimize contact (boots, apron, faceshield)

Ventilation: Open air or good room ventilation is normally adequate for safe use of this product. Avoid breathing vapors or fumes

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing:

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 0
Reactivity: 1
Specific Hazard:

HMIS RATING

Health Hazard..... :
Fire Hazard :
Reactivity :
Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Pan Pads Condensate Treatment

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Pan Pads Condensate Treatment
Synonyms: Condensate Drain Pan Treatment
EPA Regis. No. 33427-4-65516
EPA Est. No. 33427-NY-1

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4295, 4296

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Alkyl (60% C14, 30% C16, 5 %C12, 5% C18) Dimethyl benzyl ammonium chloride Monohydrate	98391-01-5	20	LD50: 500mg/kg	not est.
Alkyl (68% C12, 32% C14) Dimethyl ethylbenzyl ammonium chloride Monohydrate	68956-79-6	20	LD50: 500mg/kg	not est.
Borax		60	not est..	not est.

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: 14%
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: N/A

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.):
pH @ Solution:
pH as Distributed:
Appearance: White tablet
Odor: odorless

IV - FIRE AND EXPLOSION

Flash Point F: Non Flammable **Flammable Limits:** N/A
Extinguishing Media: Water, CO₂, foam, dry chemical.
Special Fire Fighting Procedures: Use self-contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable.
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Oxides of carbon, nitrogen, and other toxic decomposition products in case of incomplete combustion.
Conditions Contributing to Hazardous Polymerizations: N/A

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Not known; expected to cause nausea and diarrhea.

EYES & SKIN: Severe irritation.

B. SUBCHRONIC, CHRONIC, OTHER: Product is not meant to be inhaled, ingested, or touched as implied by its packaging, which doesn't permit skin contact.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Move person to fresh air.

EYES:

SKIN: Flush/wash thoroughly for at least 15 minutes, for eyes, seek immediate medical attention.

INGESTION: Promptly drink large quantities of milk, egg whites, gelatin solution or water, avoid alcohol. Do not induce vomiting. Seek medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Pick up material with scoop, shovel or vacuum and place in closed container. Flush area with water.

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations. Pesticides are acutely hazardous, and improper disposal of excess is a violation of Federal law.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None

Eye Protection: Safety glasses **Gloves:** Disposable

Other Clothing and Equipment: N/A

Ventilation: N/A

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Tablet should never be removed from its housing. It must not come in contact with food. Avoid contact with skin and eyes. Store in cool, dry place.

Additional Information: Keep away from heat, sparks and flames. Do not take internally. For use by service personnel only.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Pan -Spray Aerosol

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Pan -Spray Aerosol
Synonyms: Rubberized Coating

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4296

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Xylene *	1330-20-7		100 ppm	100 ppm
Aliphatic Hydrocarbon *	110-54-3		500 ppm	500 ppm
Poly (Butadiene-co-styrene)	9003-55-8		not established	not established
N-tallowalkyl trimethylene diamines ole.	91791-53-5		not determined	not determined
Hydrocarbon propellant	68476-86-8		800 ppm	800 ppm

* Subject to reporting requirements of SARA TITLE III, Section 313
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: <75 PSI
Evaporation Rate:
Solubility in H₂O: Nil
Freezing Point °F:
Boiling Point °F: Not determined
Specific Gravity H₂O=1 @25° C: 0.850

Vapor Density (Air=1) 60-90° F: Heavier than Air
VOC Content (% by wt.): 68%
pH @ Solution:
pH as Distributed:
Appearance: White coating
Odor:

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** Level 3 Aerosol

Extinguishing Media: Dry Chemical. CO₂. Halogenated Extinguishing Agent. Stop Gas Flow

Special Fire Fighting Procedures: Gas fires should not be extinguished unless the gas flow can be stopped immediately. Allow the fire to burn itself out. If the source cannot be shut off immediately, all equipment and surfaces exposed to the fire should be cooled with water to prevent over-heating, flash-backs, or explosions. Control fire until gas supply can be shut off. Use proper protective equipment. Use fresh air respirator when exposure to hazardous concentrations of toxic gases is possible.

Unusual Fire and Explosion Hazards: This product releases Flammable Vapors at well below ambient temperatures and readily forms flammable mixtures with air exposed to an ignition source. It will burn in the open or be explosive in confined spaces. Its vapors are heavier than air and may travel long distances to a point of ignition, and then flash back. Alkaline/chlorine gas mixtures have produced explosions.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: None
Conditions Contributing to Hazardous Polymerizations: Not applicable

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): Inhalation - High vapor/aerosol concentrations (greater than approximately 100 ppm) are irritating to the eyes and the respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

EYES - Slightly irritating but does not injure eye tissue.

SKIN - Low order of toxicity. Frequent or prolonged contact may irritate and cause dermatitis. Skin contact may aggravate an existing dermatitis condition.

INGESTION - Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly minimal toxicity

B. SUBCHRONIC, CHRONIC, OTHER: Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Using proper respiratory protection, immediately remove the affected victim from exposure.

Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

EYES: Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN: Flush with large amounts of water; use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Clean up area by mopping or with absorbent materials and place in closed container for disposal. Consult Federal, State, and local disposal authorities.

Waste Disposal Methods: Consult local authorities for proper waste disposal procedures. Empty de-pressurized containers can not be reused. Cans which are pressurized or contain liquid must be disposed of in a permitted waste management facility. Consult Federal, State and local disposal authorities for approved procedures.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Based on contamination level and working limits of the respirator, use a respirator approved by NIOSH/MSHA.

Eye Protection: Face shield and goggles or chemical goggles should be worn. **Gloves:** Impervious gloves should be worn. Gloves contaminated with the product should be discarded. Polyfluorinated polyethylene has been suggested.

Other Clothing and Equipment: Standard work clothing.

Ventilation: Use adequate level exhaust ventilation. Note: Where carbon monoxide may be generated, special ventilation may be required. Local exhaust recommended when appropriate to control employee exposure.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: When utilizing pressurized containers follow standard safety practices for handling aerosols.

Additional Information: Do not store at temperatures above 120°F. Odor is not an adequate warning of potentially hazardous concentrations in air. Releases of these gases may cause a flammable atmosphere with explosion potential.

NFPA

Health Hazard 2
Fire Hazard..... 4
Reactivity 0
Specific Hazard

HMIS RATING

Health Hazard..... : 2
Fire Hazard : 4
Reactivity..... : 0
Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Pan-Treat

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Pan-Treat
Synonyms: Condensate Pan Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4296-60

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
n-Alkyl(60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride.	98391-01-5			

No ingredients identified by OSHA or EPA as hazardous are known to be present.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): 0
Solubility in H₂O: 100%	pH @ Solution:
Freezing Point °F: N/A	pH as Distributed:
Boiling Point °F: N/A	Appearance: Solid tablets
Specific Gravity H₂O=1 @25° C: 0.981	Odor:

IV - FIRE AND EXPLOSION

Flash Point F: No flash - melting point is 225°F **Flammable Limits:** N/A N/A
Extinguishing Media:
Special Fire Fighting Procedures: Dry contained positive pressure breathing apparatus and protective clothing should be worn in fighting fires involving chemicals
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: None known
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: Airborne particles irritates nasal passages. If vapors or dust causes irritation, remove to fresh air. EYES: Contact with eyes is painful and irritating. SKIN: Prolong or repeated contact with skin may cause irritation.
B. SUBCHRONIC, CHRONIC, OTHER:
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Unnecessary exposure to this product should be avoided.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Wash eyes with copious amounts of water for at least 15 minutes

SKIN: Wash skin with soap and water: rinse thoroughly

INGESTION: If ingested call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up and collect in appropriate container. Wash area with water

Waste Disposal Methods: May be disposed in a permitted landfill in accordance with Federal, state or local regulations

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Avoid contact with eyes **Gloves:** Not required, wash hands after handling.

Other Clothing and Equipment: Wear protective clothing for repeated or prolonged contact.

Ventilation: Local exhaust

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep out of the reach of children. Do not store near fire or open flame.

Additional Information: Caution should be used to avoid contact with eyes or prolonged contact with skin. Wash thoroughly after handling. If ingested call a physician immediately.

NFPA

Health Hazard

Fire Hazard

Reactivity

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard

Reactivity

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Phase III Refrigeration Oil Test Kit (L)

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Phase III Refrigeration Oil Test Kit (L)
Synonyms: Toluene / Alcohol Blend

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4320L

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Toluene* (ORAL LD50 = 5000mg/kg) (DERMAL LD50 = 14g/kg)	108-88-3	<50	200ppm	200ppm
Methanol** (ORAL LD50 = 13g/kg) (DERMAL LD50 = 20g/kg)	67-56-1	<35	200ppm	200ppm
Isopropanol*** (ORAL LD50 = 5840mg/kg) (DERMAL LD50 = 13g/kg)	67-63-0	<30	400ppm	400ppm

*STEL=150ppm; **STEL=1250ppm;

***STEL=500ppm

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Unknown

Evaporation Rate: (ether=1): N/AV

Solubility in H₂O: Complete

Freezing Point °F: N/A

Boiling Point °F: <212°

Specific Gravity H₂O=1 @25° C: .827

Vapor Density (Air=1) 60-90° F: Unknown

VOC Content (% by wt.): 100

pH @ Solution: N/A

pH as Distributed: N/A

Appearance: Clear, colorless solution

Odor: Characteristic

IV - FIRE AND EXPLOSION

Flash Point F: <55°F **Flammable Limits:** Unknown

Extinguishing Media: In case of fire use CO₂, foam or dry chemical.

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.

Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Heat and open flame.

Incompatibility: Unknown.

Hazardous Decomposition Products: Unknown.

Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYE & SKIN: May cause irritation. Prolonged and repeated contact to skin may result in dermatitis. INGESTION & INHALATION: Harmful if swallowed or inhaled. May cause nausea, dizziness and upset stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove patient to fresh air.

EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush with plenty of water. If irritation develops, call a physician.

INGESTION: If swallowed, DO NOT induce vomiting. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush away spill with plenty of water.

Waste Disposal Methods: Flush product waste down drain with plenty of water.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing vapors

Eye Protection: Safety glasses **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: None required.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing.

Additional Information: Keep away from heat, sparks. Wash hands after handling. Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 2

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 2

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Phase III Refrigeration Oil Test Kit (S)

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Phase III Refrigeration Oil Test Kit (S)
Synonyms: Potassium Hydroxide Solution
(trace amount KOH-is not a corrosive)

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4320S

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Chloride (ORAL LD50 = N/AV) All ingredients are TSCA listed.	7647-14-5	<5	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/AV
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: Unknown
Specific Gravity H₂O=1 @25° C: 1.106

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): Unknown
pH @ Solution: N/A
pH as Distributed: 10.9
Appearance: Clear, colorless solution
Odor: Characteristic

IV - FIRE AND EXPLOSION

Flash Point F: No flash to boiling **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Unknown.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYE & SKIN: May cause irritation. Prolonged and repeated contact to skin may result in dermatitis. INGESTION: May upset stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.

SKIN: In case of contact, flush with plenty of water. If irritation develops, call a physician.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water or milk to drink. Give at least one ounce of vinegar in an equal amount of water. Never give anything by mouth to an unconscious person. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Flush away spill with plenty of water.

Waste Disposal Methods: Flush product waste down drain with plenty of water.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required

Eye Protection: Safety glasses **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: None required.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing. Wash hands after use.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Pipe-Dri

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Pipe-Dri
Synonyms: Insulation Spray

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4297

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Methylene Chloride*	75-09-2	60-75	50ppm	500ppm
Propane	74-98-6	<5	1000ppm	1000ppm
Isobutane	76-28-5	<5	800ppm	not est.

*SARA 313 Information: Subject to reporting and supplier notification of SARA 313

*RO #1000 lbs.

VOC Content: 25.00% By Weight
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: psig @ 25°C: 80
Evaporation Rate: (ether=1): <1
Solubility in H₂O: Insoluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.25

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: White coating
Odor: Sweet Chlorinated Odor

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** LEL: Not Est. UEL: Not Est.

Extinguishing Media: CO₂, Standard foam, Dry chemical, Halon

Special Fire Fighting Procedures: Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Exposure to temp. over 120°F may cause bursting or venting. Heat or fire may cause hazardous fumes: CO, phosgene chlorine and HCL.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable; avoid sources of heat.

Incompatibility: Oxidizing Materials.

Hazardous Decomposition Products: Will not occur.

Conditions Contributing to Hazardous Polymerizations: Open flames.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INGESTION: Nausea, headache, vomiting. EYES: Moderate to severe irritation. SKIN: May cause irritation, due to defatting of tissues. INHALATION: Nausea, dizziness, coordination impairment on long exposure.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give oxygen if breathing is difficult. Get medical attention.

EYES: Flush with large amounts of water for 15 minutes and get medical attention.

SKIN: Wash with soap and water. Remove contaminated clothing.

INGESTION: Do not induce vomiting. Get medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills - Mop up, soak up immediately. Remove to outdoors. Large spills - Evacuate area. Contain liquid; transfer to closed metal containers. Keep out of water supply.

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations as well as EPA standards.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None

Eye Protection: Safety glasses **Gloves:** Disposable

Other Clothing and Equipment: None

Ventilation: General ventilation recommended to maintain the level of the hazardous ingredients to less than half of the TLV

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not store where temperatures will exceed 120°F. Keep out of reach of children.

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Pneu-flush

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Pneu-flush
Synonyms: Hydrofluorocarbon

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4298

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Decafluoropentane	138495-42-8	60-85		200
Methanol	67-56-1 811-	3-4		200
Tetrafluoroethane (HFC-134a)	97-2	15-25		1000
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: 260 mm/Hg @ 77°F
Evaporation Rate: >>1 (ether=1)
Solubility in H₂O: Minimal
Freezing Point °F: N/A
Boiling Point °F: 118°F
Specific Gravity H₂O=1 @25° C: 1.497

Vapor Density (Air=1) 60-90° F: Heavier than air
VOC Content (% by wt.): 100
pH @ Solution: N/A
pH as Distributed: N/A
Appearance: Colorless liquid
Odor: Ethereal odor

IV - FIRE AND EXPLOSION

Flash Point F: Non Flammable **Flammable Limits:** Air, LEL=9% & UEL=11%
Extinguishing Media: CO₂, dry chemical or water
Special Fire Fighting Procedures: Wear self-contained NIOSH approved breathing apparatus and proper eye and skin protection.
Unusual Fire and Explosion Hazards: Containers generate pressure when heated, causing violent bursting and dangerous propelling of container. Cool containers with water spray or fog.

V - REACTIVITY DATA

Stability - Conditions to avoid: Material is stable - Avoid high temperatures or open flames which may cause decomposition.
Incompatibility: Avoid strong bases, reactive materials (e.g. powdered aluminum, sodium, potassium, calcium, magnesium, zinc, molten aluminum, barium & lithium shavings).
Hazardous Decomposition Products: Hydrochloric and hydrofluoric acids, and possibly carbonyl halides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Gross overexposure may cause: suffocation if air is displaced by vapor, irregular heart beat with a strange sensation in the chest, lightheadedness, dizziness, fainting, drowsiness. It is unlikely that concentrations sufficient to produce these effects would be achieved without producing other signs of overexposure such as irritation of the nose and throat with sneezing, sore throat, or runny nose. ORAL: Short term exposure may cause irritation of digestive tract, stomach pain, nausea, vomiting or diarrhea. Liquid which may enter the lungs may result in "chemical pneumonia". SKIN: Slight irritation with redness, itching or swelling may occur. Defatting of the skin can occur with repeated overexposure. EYES: Liquid contact: Will irritate eyes and may cause redness, swelling, pain, tearing and hazy vision.

B. SUBCHRONIC, CHRONIC, OTHER: CARCINOGENICITY: None of the components of Air Line Flushing Solvent are listed as carcinogens by NTP, IARC, or OSHA

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Call physician.

EYES: In case of contact, flush with water for 15 minutes, lifting eyelids occasionally until no evidence of the chemical remains. If irritation persists, call physician.

SKIN: Wash promptly with soap and water for at least 15 minutes. Remove contaminated clothing and shoes.

INGESTION: If conscious, give 2-4 glasses of water and induce vomiting by touching finger to back of throat. Do not give stimulants. Contact physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Spill, Leak or Release: Although the chances of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, evacuate area, absorb spilled liquid with commercial nonflammable absorbent, (i.e. sand, vermiculite). Remove unprotected personnel. Protected personnel should remove ignition sources and shut off fire sources. Provide ventilation. Shovel (spark proof) absorbent material into drums and close. Do not flush to sewer.

Waste Disposal Methods: Comply with Federal, State and Local regulations. Consult appropriate regulatory agency prior to disposal or discharge of waste material.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required in ventilated work areas. Although unlikely in aerosol packaging, in NIOSH approved self-contained or supplied air respirators for emergencies and in situations where air may be displaced by vapors.

Eye Protection: Chemical protective safety glasses. **Gloves:** For long repeated contact, impervious gloves.

Other Clothing and Equipment: Protective clothing for prolonged or repeated contact.

Ventilation: Adequate. Local Exhaust: For poorly ventilated work areas. Mechanical: Adequate for storage.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid breathing vapors. Use only with adequate ventilation. Avoid lighted cigarettes, flame, welding or hot spots which may generate toxic decomposition products. Vapors are heavy and may concentrate in low poorly ventilated areas.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 0
Reactivity: 1
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 0
Reactivity.....: 1
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Presst-O-Cel Insulation Tape

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Presst-O-Cel Insulation Tape
Synonyms: Same

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4218

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
None				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Not soluble
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: N/A

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ N/A Solution: N/A
pH as Distributed: N/A
Appearance: N/A
Odor: N/A

IV - FIRE AND EXPLOSION

Flash Point F: >25°F **Flammable Limits:** Not est.
Extinguishing Media: Carbon Dioxide, ABC dry chemical, water spray or fog, foam
Special Fire Fighting Procedures: Use self-contained breathing apparatus when fighting fire in enclosed areas. Do not breath fumes.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - none
Incompatibility: Strong oxidizing agents.
Hazardous Decomposition Products: CO₂; CO; hydrocarbons chlorine containing compounds and smoke.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: N/A, EYES & SKIN: None
B. SUBCHRONIC, CHRONIC, OTHER: None known.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: N/A
SKIN: N/A
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Recover material and place in a proper container for reuse or disposal.

Waste Disposal Methods: In an approved landfill, or incinerated under specific conditions.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: N/A **Gloves:** N/A

Other Clothing and Equipment: Eye wash and safety shower to be available.

Ventilation: General dilution; 9000 cfm dilution.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool dry place.

Additional Information: None

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Quick Seal Pipe Repair

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Quick Seal Pipe Repair
Synonyms: Resin impregnated fiberglass tape

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4299-W

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
polypropylene polyol diphenyl methane	9048-57-1	34.4		
di-isocyanate prepolymer	101-68-8	7.4		
methylene bisphenyl isocyanate (MDI)	---	trace		
silicone	---	4.7		
synthetic rubber	---	4.7		
aluminum foil pouch	---	46.4		
fiberglass knit fabric	---	2.4		
polyethylene core				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility in H₂O: Nil
Freezing Point °F: N/A
Boiling Point °F: N/A

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution:
pH as Distributed: N/A
Appearance: White to yellowish, tacky resin on a fiberglass roll.
Odor: Very slight odor.

Specific Gravity H₂O=1 @25° C: 1.23@110°F
(prepolymer)

IV - FIRE AND EXPLOSION

Flash Point F: ASTM D-93 (closed cup) >350°F; nil for cured product. **Flammable Limits:** Nil N/A
Extinguishing Media: H₂O spray, foam, CO₂, dry chemicals.
Special Fire Fighting Procedures: Keep undamaged product cool with H₂O fog while fighting fire. Firefighters to wear self-contained breathing apparatus and full protective clothing.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable, Polymerization may occur if material is heated for long periods. Contamination by moisture or materials that react with isocyanates may cause pressure build-up.
Incompatibility: None
Hazardous Decomposition Products: None
Conditions Contributing to Hazardous Polymerizations: May occur. Excessive moisture and/or heat; store in cool, dry conditions.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Avoid breathing dust from cutting cured product. A vacuum saw is recommended. SKIN: Minor irritation. Wash thoroughly with soap and water. INGESTION: Drink plenty of water. Consult physician. DO NOT induce vomiting. EYES: Irritation. Rinse with water for 15 minutes and consult physician.

B. SUBCHRONIC, CHRONIC, OTHER: N/A

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Open cuts or abrasions or rashes on skin.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Provide fresh air.

EYES: Rinse with water for at least 15 minutes. Consult physician.

SKIN: Wash thoroughly with soap and water.

INGESTION: Drink plenty of water. Consult physician. DO NOT induce vomiting.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: If package spills or breaks, ensure ventilation is adequate to prevent build up of potentially harmful vapors. Scrape up material and place into labeled sealable container for disposal. Decontaminate area and equipment with dilute ammonia and detergent. Mix additional absorbent into spill and dispose.

Waste Disposal Methods: Solid waste land fill or authorized incineration.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Special Firefighting Procedures: Wear self-contained breathing apparatus.

Eye Protection: Safety Glasses **Gloves:** Gloves Provided

Other Clothing and Equipment: Quick Seal will adhere to clothing. Wear gloves while handling uncured product. Avoid eye and skin contact.

Ventilation: Removal of old bandages with oscillating saws without adequate ventilation will potentially cause irritant dusts to be generated into atmosphere. The use of shears is recommended to remove old bandages from pipes so as to minimize dust formation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Store in a cool, dry, well ventilated area out of direct sunlight. Store away from all heat sources. Optimum storage conditions 40-83°F. For best results, rotate stock.

Additional Information: N/A

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 1

Specific Hazard

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 0

Reactivity: 1

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Quick Seal Pipe Repair

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Quick Seal Pipe Repair
Synonyms: Epoxy adhesive (putty)

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4299-P

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
2,4,6 Tri (methyl aminomethyl) phenol	90-72-2			
Epoxy resin	25068-38-6			
Mercaptan Terminated Polymer	unknown			
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility in H₂O: Negligible
Freezing Point °F:
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.9

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.):
pH @ Solution:
pH as Distributed:
Appearance: Grey or white semi-solid
Odor: Slight Mercaptan

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** N/A
Extinguishing Media: Water spray, CO₂, dry chemical.
Special Fire Fighting Procedures: Wear SCBA and protective clothing.
Unusual Fire and Explosion Hazards: May generate toxic or irritating fumes.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - None.
Incompatibility: Oxidizers.
Hazardous Decomposition Products: Aldehydes, acids, CO, sulfur oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: N/A SKIN: Severe Irritation EYES: Severe Irritation
INGESTION: Nausea.
B. SUBCHRONIC, CHRONIC, OTHER: Prolonged skin or eye exposure may cause irritation, sensitization.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: N/A

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: Flush with large amounts of water for 15 minutes. Seek medical attention.
SKIN: Wash with soap and water. If irritation persists, seek medical attention.
INGESTION: Give large amounts of water. Induce vomiting. If unconscious, do not give anything by mouth or induce vomiting. Seek medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Pick up spilled paste to prevent disposal in sewers, waterways or soil. Wear polyethylene gloves.

Waste Disposal Methods: Collect and dispose of as non-hazardous in accordance with all local, state, and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None

Eye Protection: Safety glasses **Gloves:** Polyethylene Gloves

Other Clothing and Equipment: N/A

Ventilation: Local exhaust acceptable.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep container closed when not in use. Do not stand near heat, sparks or open flame.

Additional Information: Keep out of reach of children. Wash thoroughly before eating , drinking, smoking, or leaving work area.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Rx11-flush

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Rx11-flush
Synonyms: Hydrofluorocarbon

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4300-11

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
tetrafluoroethane	811-97-2	10-20	1000 ppm	
1,1,1,2,3,4,4,5,5,5-decafluoropentane	138495-42-8	15-35	200 ppm*	
1,2-trans-dichloroethylene	156-60-5	50-75	200 ppm	
ethyl alcohol	64-17-5	5-20	1000 ppm	

*No Federal OSHA PEL or TLV values are established for this compound. The 200 ppm is the Acceptable Exposure Limit established by DuPont as an 8 hour & 12 hour time weighted average; 400 ppm has been established as ceiling limit.

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: 5.05 psig @70°F

Evaporation Rate: {ether=1} >1

Solubility in H₂O: 0.4%

Freezing Point °F:

Boiling Point °F: 106°F

Specific Gravity H₂O=1 @25° C: 1.206 (10.06 lbs/gal)

Vapor Density (Air=1) 60-90° F:

VOC Content (% by wt.): 100

pH @ Solution: N/E

pH as Distributed: N/E

Appearance: Colorless liquid

Odor: Ethereal odor

IV - FIRE AND EXPLOSION

Flash Point F: Not flammable per Tag Closed Cup and Pensky-Martens Closed Cup. Flash Point is 82.4°F (no fire point) bt Tag Open Cup. **Flammable Limits:** % vol LEL=5.0% UEL=14.4%

Extinguishing Media: CO₂, dry chemical or water

Special Fire Fighting Procedures: Keep containers cool with water spray. Wear self-contained NIOSH approved breathing apparatus and proper eye and skin protection.

Unusual Fire and Explosion Hazards: Container generates pressure when heated, causing violent bursting and dangerous propelling of container. May form toxic decomposition products above 480° F. This material should not be used in vapor degreasers or applications where the solvent is heated above ambient temperatures. Rx11-flush exhibits no Tag Closed Cup flash point to boiling. Since Rx11 is a mixture, fractionation may occur upon evaporation, resulting in a solution enriched in flammable liquids. Take precautions to avoid this condition.

V - REACTIVITY DATA

Stability - Conditions to avoid: Material is stable at normal room temperatures and storage conditions. May decompose at temperatures above 480°F.

Incompatibility: Avoid strong bases, reactive metals (e.g. powdered aluminum, sodium, potassium, calcium, magnesium, zinc, molten aluminum, barium and lithium shavings. Strong oxidizing agents.

Hazardous Decomposition Products: This material can be decomposed by open flame, glowing metal surfaces, etc., forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): INHALATION: Effects may include: Temporary central nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, drowsiness and loss of consciousness; temporary lung irritation effects with discomfort, pulmonary edema (body fluid in the lungs) with cough, wheezing, abnormal lung sounds, possibly progressing to severe shortness of breath and bluish discoloration of the skin; abnormal liver function as detected by laboratory tests; altered white blood cell count; nonspecific discomfort, such as nausea and vomiting, or weakness may also occur; symptoms may be delayed. These effects are similar to intoxication caused by ethyl alcohol. Prolonged exposure to very high concentrations (>25% in air) may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation. ORAL: Based on animal data, this material may cause pathological changes in the kidneys. SKIN: Skin contact may include severe skin irritation with burning, redness, swelling, rash, discomfort or pain. EYES: Persons wearing contact lenses should wear chemical protective safety glasses when using this product. Liquid contact: eye contact may include severe eye irritation with burning, redness, swelling, rash, discomfort or pain. Vapor Contact: mild irritant. Individuals with chronic respiratory diseases may have increased susceptibility to the toxicity of excessive exposures. Increased susceptibility of the effects of

B. SUBCHRONIC, CHRONIC, OTHER: The components of Rx11-flush are not listed as carcinogens by NTP, IARC, or OSHA.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Do not give Epinephrine. Give artificial respiration if necessary. Call a physician.

EYES: Persons with contact lenses should wear chemical protective safety glasses when using this product. Flush with water for 15 minutes, lifting eyelids occasionally until no evidence of the chemical remains. Call a physician.

SKIN: Wash promptly with soap and water for at least 15 minutes. Remove contaminated clothing and shoes.

INGESTION: Material poses an aspiration hazard. If swallowed, do not induce vomiting. Immediately give two glasses of water. Never give anything by mouth to an unconscious person. Do not give stimulants. Contact physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Chances of a significant leak of an aerosol are nil. However, in the event of such an occurrence, evacuate area and absorb the spilled liquid with a nonflammable absorbent (i.e. sand, vermiculite). Remove unprotected personnel. Protected personnel should remove ignition sources and shut off fire source. Provide ventilation. Shovel (spark proof) absorbent material into drums and close.

Waste Disposal Methods: Comply with Federal, State and local regulations. Consult appropriate regulatory agency prior to disposal or discharge of waste material. Do not flush to sewer.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None required in ventilated work areas. In unlikely event that product vapor is released to ambient air, use NIOSH-approved self-contained or air respirators for emergencies and where air may be displaced by vapors.

Eye Protection: Chemical protective face shield. **Gloves:** Neoprene preferred.

Other Clothing and Equipment: Protective clothing for prolonged or repeated contact: PVA or neoprene preferred.

Ventilation: Adequate. Use local exhaust for poorly ventilated areas.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid breathing vapors. Use only with adequate ventilation. Avoid lit cigarettes, flame, welding or hot spots which may generate toxic decomposition products. Vapors are heavy and may concentrate in poorly ventilated areas.

Additional Information:

NFPA

Health Hazard: 1
Fire Hazard.....: 1
Reactivity: 1
Specific Hazard:

HMIS RATING

Health Hazard.....: 1
Fire Hazard: 1
Reactivity: 1
Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Rx-Acid Scavenger

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Rx-Acid Scavenger
Synonyms: Acid neutralizer

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4301

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
No hazardous ingredients are contained in the product. All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.):
Solubility in H₂O: Insoluble	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: 315°C	Appearance: Clear, straw-colored liquid
Specific Gravity H₂O=1 @25° C: 0.88 (+/-0.03)	Odor: Mild aromatic

IV - FIRE AND EXPLOSION

Flash Point F: 148.9 oF ((open cup) **Flammable Limits:** N/A
Extinguishing Media: CO₂, dry chemical, water spray, fog or foam
Special Fire Fighting Procedures: For fires involving this material, do not enter any closed or confined fire space without proper protection equipment. This may include self-contained breathing apparatus to protect against the hazardous effect of normal products of combustion or oxygen deficiency.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Strong oxidizers, heat, sources of ignition
Incompatibility: Reactive with oxidizing agents, acids, alkalis
Hazardous Decomposition Products: By fire or thermal decomposition: CO, CO₂, oxides of nitrogen, traces of hydrogen cyanide (HCN), 2,6-diisopropylphenyl isocyanate (DIPPI), aniline derivatives, and carbamates may be produced. At temperatures above 350°F (180°C) the aromatic urea formed from the carbodiimide-water reaction thermally degrades to the corresponding isocyanate and amine.
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): CAUTION: May cause respiratory tract, eye and skin irritation. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Do not ingest. SKIN & EYES: moderately irritating to eyes and skin. INHALATION: moderately irritating to the respiratory system. INGESTION: may cause gastrointestinal irritation and diarrhea

B. SUBCHRONIC, CHRONIC, OTHER: See hazardous decomposition statement in section V-Reactivity Data. These isocyanate compounds can cause allergic skin and respiratory reactions, as well as acute irritation effects to the eyes, skin, mucous membranes, and digestive tract.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Repeated or prolonged contact is not known to aggravate medical condition

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYES: Check for and remove any contact lenses. In case of contact, flush eyes with plenty of water for at least 15 minutes. If irritation develops, get medical attention.

SKIN: In case of contact, flush with plenty of water. If irritation develops, get medical attention. Remove contaminated clothing & shoes. Wash clothing and shoes before reuse.

INGESTION: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Absorb spill with an inert material and put into an appropriate waste disposal. Do not allow to enter drains or waterways.

Waste Disposal Methods: Waste must be disposed of in accordance with federal, state and local environmental control regulations

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Respiratory protection is not required for the use of this product. Wear appropriate respirator when ventilation is inadequate.

Eye Protection: Safety glasses with side shield or chemical goggles. **Gloves:** Impervious gloves.

Other Clothing and Equipment: Wear appropriate protective clothing and chemically resistant gloves to prevent skin contact.

Ventilation: Provide exhaust ventilation or other engineered controls to keep airborne concentrations of vapors in control. Ensure that eyewash stations and safety showers are available.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing:

Additional Information:

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Safety Sorbent

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Safety Sorbent
Synonyms: Amorphous Silicate

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4816

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Amorphous Mineral Silicate (no free silica)		N/A	N/A	N/A

All components are non-hazardous. Product is inert, non-biodegradable and non-toxic.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: Negligible	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: Shades of Grey
Specific Gravity H₂O=1 @25° C: 2.2 - 2.4	Odor: Odorless

IV - FIRE AND EXPLOSION

Flash Point F: Non-Flammable **Flammable Limits:** N/A
Extinguishing Media: N/A
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Do NOT use with HYDROFLUORIC ACID (HF). Sorbent will react with HF.
Hazardous Decomposition Products: N/A
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INHALATION: No. SKIN: No. INGESTION: No.
B. SUBCHRONIC, CHRONIC, OTHER: No known acute or chronic health hazards. Under windy conditions, sorbent can be a nuisance dust.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: N/A
SKIN: N/A
INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Vacuum or sweep up. Maintain good housekeeping procedures regarding dust.

Waste Disposal Methods: Material itself if non-hazardous and may be disposed of in any landfill as defined by RCRA (40 CFR Part 261). After absorption of hazardous or toxic liquid, follow local, state or federal regulations for proper disposal methods.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: N/A **Gloves:** Normally none required.

Other Clothing and Equipment: Normally none required. Special consideration should be given to liquids absorbed.

Ventilation: N/A

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: None

Additional Information:

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



Material Safety Data Sheet Scrubs

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Scrubs
Synonyms: Waterless Hand Cleaner Towel

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4366

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Adepsine Oil This product is not known to contain any compound in concentrating requiring reporting under SARA Title III, Section 313 All ingredients are TSCA listed.	8052-41-3	N/A	100ppm	100ppm

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Dispersible
Freezing Point °F: N/A
Boiling Point °F: 212°
Specific Gravity H₂O=1 @25° C: 0.97

Vapor Density (Air=1) 60-90° F: >1
VOC Content (% by wt.):
pH @ 100% Solution: 8.25 +/- 0.5
pH as Distributed:
Appearance: Opaque white liquid saturated onto towels
Odor: Citrus (orange)

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** No data
Extinguishing Media: CO₂, dry chemical, foam, fog or water spray.
Special Fire Fighting Procedures: Keep containers cool and vapors down with water spray.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong oxidizers and acids
Hazardous Decomposition Products: CO, CO₂, H₂S, sulfur dioxide, smoke, soot
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): INGESTION: May cause irritation of throat or stomach, nausea, vomiting and diarrhea if swallowed. EYES: May cause irritation.
B. SUBCHRONIC, CHRONIC, OTHER: Pre-existing skin conditions may be aggravated.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: &

SKIN: Flush with water for 15 minutes, lifting eyelids. See a physician immediately.

INGESTION: Not a likely exposure route. If a large quantity of liquid is swallowed, do not induce vomiting. Call a physician or poison center immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Caution: slip hazard. Wipe up small releases with a dry absorbent. For large releases, prevent material from entering sewers or drains.

Waste Disposal Methods: Consult local, state or federal regulations. Discard empty container.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None

Eye Protection: None **Gloves:** None

Other Clothing and Equipment: Not usually necessary.

Ventilation: Nothing special usually needed.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: For external use only. Do not allow to contact eyes. Do not smoke while using - not for use around mouth or eyes.

Additional Information: Follow label directions. Keep away from heat sources. Keep out of reach of children. Keep container tightly sealed.

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET Seal-Loc

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Seal-Loc
Synonyms: Thread Sealing Compound

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4350

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
This product is not classified as hazardous in accordance with OSHA 1910.1200				

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: Insoluble	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: Blue paste
Specific Gravity H₂O=1 @25° C: 1.2	Odor: none

IV - FIRE AND EXPLOSION

Flash Point F: N/A/N/A **Flammable Limits:** N/A/N/A
Extinguishing Media: Dry chemical, foam, carbon dioxide
Special Fire Fighting Procedures: Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors to provide protection for personnel.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Avoid open flame.
Incompatibility: Not none.
Hazardous Decomposition Products: CO and CO₂ may form on burning.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated /Target Organ Effects),
A. ACUTE (Primary Route of Exposure) Skin, Eyes, Ingestion
B. SUBCHRONIC, CHRONIC, OTHER: Could be mildly irritating to certain persons with prolonged contact
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Should contact with eye occur, flush with plenty of water and get medical attention

SKIN: Wash with soap and water

INGESTION: Do not induce vomiting. get medical attention

VIII - SPILL OR LEAK PROCEDURE

Spill Management: In case of spill, use absorbent material and sweep up.

Waste Disposal Methods: Non-hazardous landfill

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: Safety goggles **Glove:** Rubber gloves

Other Clothing and Equipment: None required

Ventilation: Normal ventilation

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep away from direct contact with open flame or sparkss.

Additional Information: Wash up after handling the material. Keep out of the reach of children

NFPA

Health Hazard.....: 0

Fire Hazard.....: 0

Reactivity.....: 0

Specific Hazard....:

HMIS RATING

Health Hazard.....: 0

Fire Hazard.....: 0

Reactivity.....: 0

Personal Protection....: X (Sec. 9)

Revision Date: 07/28/2006

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Material Safety Data Sheet Season Start

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Season Start
Synonyms: Sulfamic Acid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4360-88

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sulfamic Acid (ORAL LD50 - Rat 1600mg/kg) All ingredients are TSCA listed.	5329-14-6	97	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Appreciable
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: N/A

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.):
pH @ 1% Solution: 1.25
pH as Distributed: N/A
Appearance: Purple flowing granules
Odor: Pungent odor

IV - FIRE AND EXPLOSION

Flash Point F: N/A **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable. In the event of fire, use water, chemical foam, dry chemical, CO₂.
Special Fire Fighting Procedures: Water solutions of this compound result in strong acids.
Unusual Fire and Explosion Hazards: May release SO₂, SO₃ or NH₃ gases if involved in a fire.

V - REACTIVITY DATA

Stability - Conditions to avoid: If heated releases SO₂, SO₃ or NH₃ gases.
Incompatibility: Alkali, chlorine sources (bleaches).
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Causes burns to both eyes and skin. INGESTION: Harmful if swallowed. Will burn mouth, throat and stomach. INHALATION: Irritates nose, throat and skin.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Call a physician.
EYES: Flush eyes with plenty of water for at least 15 minutes. Call a physician.
SKIN: Flush skin with plenty of water for at least 15 minutes. If irritation develops, call a physician.
INGESTION: DO NOT induce vomiting. Give large quantities of water. Give at least 1 ounce of milk of magnesia or aluminum hydroxide gel in equal amounts of water. If not available, the whites of 2 - 3 eggs may be used. Never give anything by mouth to an unconscious person. Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Cautiously cover spill with bicarbonate of soda or soda ash - slaked lime mixture(50 - 50). Mix and flush to discharge using plenty of water in accordance with local, state and federal laws.

Waste Disposal Methods: Cautiously stir product waste in large volume of soda ash - slaked lime solution. Flush neutralized solution and discharge in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: NIOSH - approved filter respirator recommended in case of dust.

Eye Protection: Goggles or face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: Wash protective clothing.

Ventilation: Local and mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Keep from contact with chlorine bleaches. Wash thoroughly after handling. Keep container dry.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 1

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 1

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Season Treat

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Season Treat
Synonyms: Polyphosphate Glass

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4364

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communications Standard, (29CFR 1910.1200), this product contains no hazardous ingredients. All ingredients are TSCA listed.	N/A	N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: Solid	Vapor Density (Air=1) 60-90° F: Solid
Evaporation Rate: (ether=1) N/A	VOC Content (% by wt.): Solid
Solubility in H₂O: Complete	pH @ 1% Solution: 7.0 - 7.5
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: Solid	Appearance: Clear glassy material
Specific Gravity H₂O=1 @25° C: Solid	Odor: Typical

IV - FIRE AND EXPLOSION

Flash Point F: Non flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable.
Special Fire Fighting Procedures: None.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Wet storage.
Incompatibility: Strong oxidizer.
Hazardous Decomposition Products: Unknown.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: Results from acute toxicity testing show that the material would not be considered toxic as defined by the CPSC protocol. However, product has sharp edges which can cause skin abrasions.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
SKIN: Wash affected area thoroughly. Contact a physician if irritation develops.
INGESTION: N/A Good first aid should be followed in all cases of exposure.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spilled material and dispose of with other solid wastes. Product is slippery when wet.

Waste Disposal Methods: Disposal of product should be in adherence with above described (or similarly approved) disposal procedure. Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Normally not required. **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 10/31/06
<u>Product Name</u> Sure-Tite Cleaner	<u>Product Number</u> 4370-2	<u>Product Use</u> Cleaning pipes & fittings before connecting.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Acetone	No Data.	67-64-1	750 ppm	750 ppm
Methyl Ethyl Ketone	No Data.	78-93-3	200 ppm	200 ppm

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Highly flammable, keep away from source of heat, sparks or flame. Irritating, do not breath vapor. Emission of volatile organic compounds.

Potential Health Effects

Eyes: May cause irritation, burns.

Skin: May cause moderate irritation, defatting, dermatitis.

Ingestion: May cause abdominal pain and nausea.

Inhalation: May cause nasal and respiratory irritation and central nervous system effects.

Chronic Exposure: Over exposure may cause damage to liver, kidney, lungs and brain.

Carcinogenicity: No Data.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush thoroughly with large amounts of water for fifteen minutes.

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Call Physician.

Inhalation: Remove to fresh air.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: -4°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: No Data.

Extinguishing Media: Dry chemical, carbon dioxide or foam. Water is Non-suitable.

Fire and Explosion Hazards: Explosive limits: lower 2% upper 13%

Special Firefighting Procedures: Direct extinguisher at base of flames.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove ignition source, flame, pilot lights, electric motors. Prevent contact with skin and eyes. Cleaning method: Absorb product on paper towels or rags and put in closable container. Environment precautions: Prevent product from going into drains, open water, soil.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Use in well ventilated area. Keep away from ignition source.

Storage Requirements: Keep containers tightly closed. Keep away from ignition source.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use in well ventilated area. If TLV's exceeded, use respirator.

Eye Protection: Prevent contact with eyes. Wear glasses if necessary.

Protective Clothing: Prevent contact with skin. Use gloves if necessary.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data.°C/No Data.°F	% Volatile by Weight: No Data.%
Color: Clear	Vapor Density [air =1]: No Data.	Evaporation Rate: No Data.
Odor: Ether like	Vapor Pressure: 182 mm Hg. @ 20°C	Specific Gravity: 0.80
Boiling Point: 56°C/133°F	Solubility in Water: Appreciable	pH (concentrate): No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data.

Hazardous Polymerization: No Data.

Incompatibilities: Strong oxidizing agents.

Reactive Conditions to avoid: No Data.

Decomposition Products: Carbon dioxide, carbon monoxide.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient</u> (Specify Species)	<u>LC50 of Ingredient</u> (Specify Species)
No Data.	No Data.	No Data.	No Data.	No Data.

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	Emissions: Will emit volatile organic compounds to air. Aquatic: Not toxic.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity if < 1 Liter (0.3 gal) Adhesives if > 1 Liter	None if < 1 Liter (0.3 gal) UN1993 if > 1 Liter	II if > 1 Liter	ORM-D if < 1 Liter (0.3 gal) 3 if > 1 Liter & Flammable liquid label
IMO (Water)	Flammable liquid	UN1993	II	3
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Section 302: No chemicals Section 311/312: Acute health, chronic health, flammable Section 313: Methyl Ethyl Ketone
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	No Data.

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 10/31/06
<u>Product Name</u> Sure-Tite Purple Primer	<u>Product Number</u> 4370-3	<u>Product Use</u> Preparing PVC & CPVC surfaces for bonding.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Cyclohexanone	No Data	108-94-1	25 ppm	25 ppm
Methyl Ethyl Ketone	No Data	78-93-3	200 ppm	200 ppm
Tetrahydrofuran	No Data	109-99-9	200 ppm	200 ppm

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Highly flammable, keep away from source of heat, sparks or flame. Irritating, do not breath vapor. Emission of volatile organic compounds.

Potential Health Effects

Eyes: May cause irritation, burns.

Skin: May cause moderate irritation, defatting, dermatitis.

Ingestion: May cause abdominal pain and nausea.

Inhalation: May cause nasal and respiratory irritation and central nervous system effects.

Chronic Exposure: Over exposure may cause damage to liver, kidney, lungs and brain.

Carcinogenicity: No Data.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush thoroughly with large amounts of water for fifteen minutes.

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Call Physician.

Inhalation: Remove to fresh air.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 6°F

Autoignition Temp: No Data. °C/No Data. °F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: No Data.

Extinguishing Media: Dry chemical, carbon dioxide or foam. Water non-suitable

Fire and Explosion Hazards: Explosive limits: lower 2% upper 13%

Special Firefighting Procedures: Direct extinguisher at base of flames.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove ignition source, flame, pilot lights, electric motors. Prevent contact with skin and eyes. Cleaning method: Absorb product on paper towels or rags and put in closable container. Environment precautions: Prevent product from going into drains, open water, soil.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Use in well ventilated area. Keep away from ignition source.

Storage Requirements: Keep containers tightly closed. Keep away from ignition source.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use in well ventilated area. If TLV's exceeded, use respirator.

Eye Protection: Prevent contact with eyes. Wear glasses if necessary.

Protective Clothing: Prevent contact with skin. Use gloves if necessary.

Exposure Guidelines: No Data

Specific Engineering Controls (such as ventilation, enclosed process): No Data

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data°C/No Data°F	% Volatile by Weight: No Data%
Color: Clear or Purple	Vapor Density [air =1]: No Data	Evaporation Rate: No Data
Odor: Ether like	Vapor Pressure: 143 mm Hg. @ 20°C	Specific Gravity: 0.80
Boiling Point: No Data°C/151°F	Solubility in Water: Nil	pH (concentrate): No Data

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data

Hazardous Polymerization: No Data

Incompatibilities: Strong oxidizing agents.

Reactive Conditions to avoid: No Data

Decomposition Products: Carbon dioxide, carbon monoxide.

SECTION 11 – TOXICOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient</u> (Specify Species)	<u>LC50 of Ingredient</u> (Specify Species)
No Data	No Data	No Data	No Data	No Data

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	Emissions: Will emit volatile organic compounds to air. Aquatic: Not toxic.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity if < 1 Liter (0.3 gal) Adhesives if > 1 Liter	None if < 1 Liter (0.3 gal) UN1993 if > 1 Liter	II if > 1 Liter	ORM-D if < 1 Liter (0.3 gal) 3 if > 1 Liter & Flammable liquid label
IMDG (Water)	Flammable liquid	UN1993	II	3
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Section 302: No chemicals Section 311/312: Acute health, chronic health, flammable Section 313: Methyl Ethyl Ketone
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	No Data.

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is belived to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herin.



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 10/31/06
<u>Product Name</u> Sure-Tite Low VOC PVC Cement	<u>Product Number</u> 4370-4	<u>Product Use</u> Bond PVC, CPVC & ABS pipe and fittings.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Acetone	No Data.	67-64-1	500 ppm	1000 ppm
Cyclohexanone	No Data.	108-94-1	25 ppm	25 ppm
Methyl Ethyl Ketone	No Data.	78-93-3	200 ppm	200 ppm
Tetrahydrofuran	No Data.	109-99-9	200 ppm	200 ppm
PVC Resin	No Data.	9002-86-2	15 mg/m3	10 mg/m3

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Highly flammable, keep away from source of heat, sparks or flame. Irritating, do not breath vapor. Emission of volatile organic compounds.

Potential Health Effects

Eyes: May cause irritation, burns.

Skin: May cause moderate irritation, defatting, dermatitis.

Ingestion: May cause abdominal pain and nausea.

Inhalation: May cause nasal and respiratory irritation and central nervous system effects.

Chronic Exposure: Over exposure may cause damage to liver, kidney, lungs and brain.

Carcinogenicity: No Data.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush thoroughly with large amounts of water for fifteen minutes.

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Call Physician.

Inhalation: Remove to fresh air.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 6°F
Autoignition Temp: No Data.°C/No Data.°F
Hazardous Products of Combustion: No Data.
Flammable Limits in Air: No Data.
Extinguishing Media: Dry chemical, carbon dioxide or foam. Water non-suitable
Fire and Explosion Hazards: Explosive limits: lower 2% upper 13%
Special Firefighting Procedures: Direct extinguisher at base of flames.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove ignition source, flame, pilot lights, electric motors. Prevent contact with skin and eyes. Cleaning method: Absorb product on paper towels or rags and put in closable container. Environment precautions: Prevent product from going into drains, open water, soil.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Use in well ventilated area. Keep away from ignition source.
Storage Requirements: Keep containers tightly closed. Keep away from ignition source.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use in well ventilated area. If TLV’s exceeded, use respirator.
Eye Protection: Prevent contact with eyes. Wear glasses if necessary.
Protective Clothing: Prevent contact with skin. Use gloves if necessary.
Exposure Guidelines: No Data
Specific Engineering Controls (such as ventilation, enclosed process): No Data

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data°C/No Data°F	% Volatile by Weight: No Data%
Color: Clear or Purple	Vapor Density [air =1]: No Data	Evaporation Rate: No Data
Odor: Ether like	Vapor Pressure: 143 mm Hg. @ 20°C	Specific Gravity: 0.80
Boiling Point: No Data°C/151°F	Solubility in Water: Nil	pH (concentrate): No Data

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data
Hazardous Polymerization: No Data
Incompatibilities: Strong oxidizing agents.
Reactive Conditions to avoid: No Data
Decomposition Products: Carbon dioxide, carbon monoxide.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
No Data	No Data	No Data	No Data	No Data

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	Emissions: Will emit volatile organic compounds to air. Aquatic: Not toxic.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity if < 1 Liter (0.3 gal) Adhesives if > 1 Liter	None if < 1 Liter (0.3 gal) UN1993 if > 1 Liter	II if > 1 Liter	ORM-D if < 1 Liter (0.3 gal) 3 if > 1 Liter & Flammable liquid label
IMDG (Water)	Flammable liquid	UN1993	II	3
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Section 302: No chemicals Section 311/312: Acute health, chronic health, flammable Section 313: Methyl Ethyl Ketone
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	No Data.

SECTION 16 – OTHER INFORMATION

No Data.

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MATERIAL SAFETY DATA SHEET

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<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 10/31/06
<u>Product Name</u> Sure-Tite PVC Cement	<u>Product Number</u> 4370-1	<u>Product Use</u> Bond PVC, CPVC & ABS pipe and fittings.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Acetone	No Data.	67-64-1	500 ppm	1000 ppm
Cyclohexanone	No Data.	108-94-1	25 ppm	25 ppm
Methyl Ethyl Ketone	No Data.	78-93-3	200 ppm	200 ppm
Tetrahydrofuran	No Data.	109-99-9	200 ppm	200 ppm
PVC Resin	No Data.	9002-86-2	15 mg/m3	10 mg/m3

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Highly flammable, keep away from source of heat, sparks or flame. Irritating, do not breath vapor. Emission of volatile organic compounds.

Potential Health Effects

Eyes: May cause irritation, burns.

Skin: May cause moderate irritation, defatting, dermatitis.

Ingestion: May cause abdominal pain and nausea.

Inhalation: May cause nasal and respiratory irritation and central nervous system effects.

Chronic Exposure: Over exposure may cause damage to liver, kidney, lungs and brain.

Carcinogenicity: No Data.

Medical Conditions Aggravated be Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush thoroughly with large amounts of water for fifteen minutes.

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Call Physician.

Inhalation: Remove to fresh air.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 6°F
Autoignition Temp: No Data.°C/No Data.°F
Hazardous Products of Combustion: No Data.
Flammable Limits in Air: No Data.
Extinguishing Media: Dry chemical, carbon dioxide or foam. Water non-suitable
Fire and Explosion Hazards: Explosive limits: lower 2% upper 13%
Special Firefighting Procedures: Direct extinguisher at base of flames.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove ignition source, flame, pilot lights, electric motors. Prevent contact with skin and eyes. Cleaning method: Absorb product on paper towels or rags and put in closable container. Environment precautions: Prevent product from going into drains, open water, soil.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Use in well ventilated area. Keep away from ignition source.
Storage Requirements: Keep containers tightly closed. Keep away from ignition source.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use in well ventilated area. If TLV’s exceeded, use respirator.
Eye Protection: Prevent contact with eyes. Wear glasses if necessary.
Protective Clothing: Prevent contact with skin. Use gloves if necessary.
Exposure Guidelines: No Data
Specific Engineering Controls (such as ventilation, enclosed process): No Data

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data°C/No Data°F	% Volatile by Weight: No Data%
Color: Clear or Purple	Vapor Density [air =1]: No Data	Evaporation Rate: No Data
Odor: Ether like	Vapor Pressure: 143 mm Hg. @ 20°C	Specific Gravity: 0.80
Boiling Point: No Data°C/151°F	Solubility in Water: Nil	pH (concentrate): No Data

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: No Data
Hazardous Polymerization: No Data
Incompatibilities: Strong oxidizing agents.
Reactive Conditions to avoid: No Data
Decomposition Products: Carbon dioxide, carbon monoxide.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
No Data	No Data	No Data	No Data	No Data

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	Emissions: Will emit volatile organic compounds to air. Aquatic: Not toxic.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity if < 1 Liter (0.3 gal) Adhesives if > 1 Liter	None if < 1 Liter (0.3 gal) UN1993 if > 1 Liter	II if > 1 Liter	ORM-D if < 1 Liter (0.3 gal) 3 if > 1 Liter & Flammable liquid label
IMDG (Water)	Flammable liquid	UN1993	II	3
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	Section 302: No chemicals Section 311/312: Acute health, chronic health, flammable Section 313: Methyl Ethyl Ketone
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	No Data.

SECTION 16 – OTHER INFORMATION

No Data.

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Material Safety Data Sheet

System Cleaner, Liquid

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: System Cleaner, Liquid
Synonyms: Emulsifier, cleaner for closed/new systems

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4370-08

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Potassium hydroxide	1310-58-3	<20	2mg/m3	2mg/m3
Sodium Metasilicate pentahydrate	10213-79-3	5-15	N/E	N/E
Tetrapotassium pyrophosphate	7320-34-5	<10	N/E	N/E
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: Similar to water
Evaporation Rate: Similar to water
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.17-1.23

Vapor Density (Air=1) 60-90° F: Similar to water
VOC Content (% by wt.): None
pH @ Solution:
pH as Distributed: 14
Appearance: Clear, pale yellow liquid
Odor: Chemical

IV - FIRE AND EXPLOSION

Flash Point F: >200°F **Flammable Limits:** N/A N/A
Extinguishing Media: Use extinguishing media appropriate for the surrounding fire
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential.
Unusual Fire and Explosion Hazards: Product emits toxic gases under fire conditions.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong oxidizers and acids. Will react violently with acids.
Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of carbon, nitrogen, phosphorous, and dipotassium oxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYE: Product may cause severe eye irritation or damage upon contact with the eye. SKIN: Exposure may cause irritation of the skin. If not removed promptly, burns may result. The extent of injury depends upon the duration of contact. INGESTION: Ingestion of the product may cause severe irritation or burns to the mucous membranes of the mouth, throat, esophagus and stomach. INHALATION: Breathing mists of this product may be irritating to the respiratory system. Breathing vapors may cause drowsiness, dizziness and headache.

B. SUBCHRONIC, CHRONIC, OTHER: The effects of chronic exposure to the eyes and skin are dependent upon the concentration and duration of the exposure. Effects similar to those for acute exposure may occur. Chronic inhalation of product mists may result in irritation of or damage to the tissues of the respiratory system, and an increased susceptibility to respiratory illness.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhalation occurs, remove to fresh air. If not breathing, give artificial respiration. Seek medical aid.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.

SKIN: Immediately rinse the affected area with water while removing contaminated clothing. Seek medical aid. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water. Seek medical aid immediately. Never give anything by mouth to an unconscious person.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Wear appropriate personal protective equipment. Contain spill, collect onto inert absorbent and place into suitable container.

Waste Disposal Methods: Follow local, state and Federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If airborne concentrations exceed published exposure limit, use a NIOSH approved respirator in accordance with OSHA respiratory requirements (29 CFR 1910.134).

Eye Protection: Chemical splash goggles and face shield. **Gloves:** Chemical resistant gloves and clothing.

Other Clothing and Equipment: An eye wash station safety shower should be accessible in the immediate area of use. Protective equipment should be cleaned thoroughly after each use.

Ventilation: Use local exhaust ventilation where mist or spray maybe generated.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing mist or vapor. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed when not in use.

Additional Information: Do not store near incompatible materials.

NFPA

Health Hazard: 3

Fire Hazard.....: 1

Reactivity: 1

Specific Hazard:

HMIS RATING

Health Hazard.....: 3

Fire Hazard: 1

Reactivity: 1

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Thermo Trap

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Thermo Trap
Synonyms: Clay Emulsion

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4371

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
According to the OSHA Hazard Communications Standard, 29 CFR 1910.1200, this product contains no hazardous ingredients. VOC Content: 0.00 All ingredients are TSCA listed.		N/A	N/A	N/A

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 15.5	Vapor Density (Air=1) 60-90° F: N/AV
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): 95
Solubility in H₂O: None	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: 212°	Appearance: Grey - white dispersion
Specific Gravity H₂O=1 @25° C: 1.02	Odor: No odor

IV - FIRE AND EXPLOSION

Flash Point F: None **Flammable Limits:** N/A
Extinguishing Media: None
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: N/AV
Incompatibility: N/AV
Hazardous Decomposition Products: N/AV
Conditions Contributing to Hazardous Polymerizations: N/AV

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): 50 mppcf or 15mg/m³ (nuisance dust) OSHA STANDARD-DRY DUST ONLY. INHALATION: Prolonged inhalation of dust may result in irritation of respiratory tract.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air.
EYES: Flush with water. If an irritation develops, contact a physician.
SKIN: Flush with water. If an irritation develops, contact a physician.
INGESTION: Call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Normal precautions should be observed in case of spills. Avoid prolonged inhalation.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: The use of NIOSH - approved respirator may be recommended

Eye Protection: Safety goggles **Gloves:** None required

Other Clothing and Equipment: None required.

Ventilation: Local exhaust.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Normal precautions should be provided.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Tri-Pow'r HD

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Tri-Pow'r HD
Synonyms: Coil Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4371-88

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Metasilicate	6834-92-0	<5%	N/A	N/A

VOC Content: 0.10% By Wt.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: N/A	VOC Content (% by wt.): @ 105 ° C= 90-91%
Solubility in H₂O: complete	pH @ 1.0 Solution: 10.5
Freezing Point °F: 32°F	pH as Distributed: 13
Boiling Point °F: 212°F	Appearance: Clear, amber liquid
Specific Gravity H₂O=1 @25° C: 1.05	Odor: Pleasant chemical fragrance

IV - FIRE AND EXPLOSION

Flash Point F: None to boiling **Flammable Limits:** N/A
Extinguishing Media: Suitable for surrounding area - water, dry chemical, foam CO₂.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - None
Incompatibility: None known
Hazardous Decomposition Products: Forced ignition of dried residues may produce CO, CO₂, nitrogen oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: Detergent in the product is irritating to the eyes. SKIN: Product is not a primary skin irritant by FHSA. Prolonged and repeated contact may cause irritation as indicated by pH in product. INHALATION: Mists or spray can irritate nasal passages. INGESTION: Acute oral LD50 (rats) >5000 mg/kg. Ingestion of large quantities causes upset to the stomach.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove source of irritation

EYES: Flush eyes with flowing water for 15 minutes, call a physician.

SKIN: Rinse affected area thoroughly with flowing water.

INGESTION: Give large quantities of water or milk followed by vinegar or lemon juice and immediately contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills may be mopped up and residues flushed to the sewer with water. Rinse mop before storing. May be neutralized with dilute acetic acid.

Waste Disposal Methods: Dispose spent solutions in accordance with local, regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing mists or spray.

Eye Protection: Goggles or face shield **Gloves:** For manual cleaning

Other Clothing and Equipment: Not normally required

Ventilation: Normal room ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: This product will withstand an occasional accidental freezing without loss in its normal performance characteristics. It must be thoroughly thawed and agitated (roll drum) before being used. Store in heated area below 135°F.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ty-Ion B11

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion B11
Synonyms: Oxygen Scavenger

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7511

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Bisulfite	7681-57-4	<35	NE	NE
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: ~30°F
Boiling Point °F: >212°F
Specific Gravity H₂O=1 @25° C: 1.16

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): 8+% @ 105C/1 hr.
pH @ Solution: N/A
pH as Distributed: 4.4
Appearance: Clear pink liquid
Odor: Sulfur odor

IV - FIRE AND EXPLOSION

Flash Point F: Not flammable **Flammable Limits:** N/A
Extinguishing Media: Product is non flammable. Use appropriate extinguishing media for surrounding fire.
Special Fire Fighting Procedures: Use NIOSH - approved self - contained breathing apparatus. Use water spray to keep containers cool and to knock down flames.
Unusual Fire and Explosion Hazards: At decomposition temperatures, oxides of sulfur release.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong oxidizers, strong acids or alkaline materials.
Hazardous Decomposition Products: Oxides of sulfur when heated to decomposition.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES: Irritating to eyes. SKIN: May cause skin irritation. INHALATION: Inhalation of product mist may irritate respiratory tract. INGESTION: Harmful if swallowed. Will cause upset to stomach.
B. SUBCHRONIC, CHRONIC, OTHER: Sensitive persons may experience respiratory allergic reactions.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. Get medical attention.
EYES: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
SKIN: Wash with soap and water. Remove contaminated clothing and footwear and wash before reuse. Get medical attention if irritation occurs or persists.
INGESTION: Give 1 - 2 glasses of water or milk to dilute. Get medical aid immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Mop up spilled material. Flush residues to drain with water.

Waste Disposal Methods: Carefully neutralize with dilute bleach and flush to sewer in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Not required.

Ventilation: Mechanical exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. If frozen, thaw and remix before use.

Additional Information: Read and observe all labeled precautions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ty-Ion B14A

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion B14A
Synonyms: Aqueous Boiler Water Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7519

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Hydroxide (ORAL LD50 140-340 mg/kg)	1310-73-2	@5	2mg/m3 (ceiling) N/A	2mg/m3 (ceiling) N/A
Sodium Nitrite (ORAL LD50 85 mg/kg rats)	7632-00-0	@25	1mg/m3	10mg/m3
Sodium Tetraborate, Pentahydrate (ORAL LD50 709 mg/kg man)	12179-04-3	@3		
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Appreciable
Freezing Point °F: -20°F
Boiling Point °F: @14.7 psig @212°
Specific Gravity H₂O=1 @25° C: 1.27

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): @105C/2 hrs. 74
pH @ 1:250 Solution: 11.4
pH as Distributed: 13.5
Appearance: Straw liquid
Odor: Amine odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boil **Flammable Limits:** N/A
Extinguishing Media: Water, CO₂, foam, dry chemical.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: Forced ignition will release nitrogen oxides.

V - REACTIVITY DATA

Stability - Conditions to avoid: Sodium nitrite is a strong oxidizing agent. Dried residues may be explosive.
Incompatibility: Acidic solutions, cyanides, reducing materials, strong oxidizers, amines.
Hazardous Decomposition Products: Nitrogen oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Concentrate corrosive to tissues. Eye and skin irritant.
INHALATION: Avoid inhaling concentrated fumes for a prolonged period. Fumes are irritating. INGESTION: Harmful if swallowed. Sodium nitrite poisoning is characterized by lack of blood pressure and cyanosis.
B. SUBCHRONIC, CHRONIC, OTHER: Sodium hydroxide shows chronic effects of skin destruction or inflammation and irritation to respiratory tract.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If breathing is difficult, remove to fresh air and immediately call a physician.

EYES: Flush eyes with flowing water for 15 minutes. Contact physician.

SKIN: Wash thoroughly with water. Shower if necessary. Launder contaminated clothing before reuse.

INGESTION: Drink large amounts of water or citrus juice and immediately contact a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: For small spills, use industrial absorbent and incinerate or bury. Wash residue with large amounts of water.

Waste Disposal Methods: Use chemical scavenger service. Rinse thoroughly and tender metal drums to reconditioner. Remove labels.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: Goggles or face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: N/A

Ventilation: Mechanical exhaust is adequate.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep container closed when not in use. Keep from freezing. Ruined by freezing. For industrial use only.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Ty-Ion B17A

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion B17A
Synonyms: Boiler Water Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7509

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Diethylamineoethanol	100-37-8	<30	10ppm (skin) 20ppm (skin)	10ppm (skin) 20ppm (skin)
Morpholine*	110-91-8	<30		
*STEL=30ppm All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: 5°F
Boiling Point °F: N/A
Specific Gravity H₂O=1 @25° C: 1.01

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): 99%
pH @ Solution: N/A
pH as Distributed: 12.2
Appearance: Straw liquid
Odor: Amine odor

IV - FIRE AND EXPLOSION

Flash Point F: 152°F **Flammable Limits:** N/A
Extinguishing Media: CO₂, dry chemical.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: N/A
Incompatibility: None known.
Hazardous Decomposition Products: Heat will release amines.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Product is an eye irritant. SKIN: Product is a skin irritant.
INHALATION: Vapors are irritating. INGESTION: Harmful if swallowed. Will cause upset to gastrointestinal tract.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Liquid vapors are irritating to mucous membranes. Remove to fresh air. If breathing is difficult, consult a physician immediately.

EYES: Flush eyes with flowing water for 15 minutes, contact physician.

SKIN: Wash thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

INGESTION: Treat as strong alkali. DO Not induce vomiting. Drink large quantities of milk, egg whites, gelatin solution or water. Contact a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Collect with absorbent. Then bury/burn. Flush residue to sewer with large amounts of water. Neutralize with dilute acetic acid.

Waste Disposal Methods: Dispose through authorized chemical scavenger service. Rinse drums thoroughly and tender to drum reconditioner.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Respirator suitable for organic amines.

Eye Protection: Safety glasses or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: N/A

Ventilation: Mechanical ventilation is adequate.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep from freezing. Keep container closed when not in use. Store away from heat or open flame. For industrial use only.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ty-Ion B20

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion B20
Synonyms: Aqueous Closed - Loop Water Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7537

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium Nitrite (ORAL LD50 Rat 85 mg/kg)	7632-00-0	<15	N/A	N/A
Sodium Tetraborate, Pentahydrate (ORAL LD50 Rat 709 mg/kg)	12179-04-3	<15	1mg/m3	10mg/m3
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: Circa 0°F
Boiling Point °F: @14.7 psig @220°
Specific Gravity H₂O=1 @25° C: 1.23

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): @105C/2hrs. 70%
pH @ 1% Solution: 10.7
pH as Distributed: 12
Appearance: Red liquid
Odor: No distinct odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boil **Flammable Limits:** N/A
Extinguishing Media: Water, CO₂, foam, dry chemical.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Sodium nitrite is a strong oxidizing agent. Dried residues may be explosive.
Incompatibility: Acidic solutions, cyanides, reducing materials, strong oxidizers, amines.
Hazardous Decomposition Products: Nitrogen oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Product is an eye irritant and may be irritating to the skin. INHALATION: Avoid concentrated fumes/mists. May be irritating. INGESTION: Harmful if swallowed. Sodium nitrite poisoning is characterized by lack of blood pressure and cyanosis.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air and contact a physician.

EYES: Flush with water for 15 minutes and get medical attention.

SKIN: Wash thoroughly with water; remove contaminated clothing and launder before reuse. Call a physician if irritation persists.

INGESTION: Induce vomiting using a mild emetic. After vomiting occurs, provide as much milk to drink as can be tolerated and call a physician.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Collect with absorbent and bury or burn. Flush residue to sewer with plenty of water.

Waste Disposal Methods: In case of large spill, dispose of through authorized scavenger service. Triple rinse plastic and metal drums thoroughly, remove labels and tender to drum reconditioner or dispose of in accordance with local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: Goggles and face shield **Gloves:** Rubber gloves

Other Clothing and Equipment: Chemical apron.

Ventilation: Adequate local ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: For industrial use only. Protect from physical damage. This product is ruined by freezing. Store in heated area.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ty-Ion C70

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion C70
Synonyms: Phosphonate/polymer cooling tower treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7597

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
# Ethylene glycol	107-21-1	10	50ppm (ceiling)	50ppm (ceiling)
Potassium hydroxide	1310-58-3	<0.5	2mg/m3 (ceiling)	2mg/m3 (ceiling)

Ingredient subject to reporting
under Section 313 of Title III
(SARA) and 40 CFR 372.

Product is non-toxic per Oral LD50 and inhalation LC50 criteria as published by NIOSH
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: Like water
Evaporation Rate: (ether=1): Like H₂O
Solubility in H₂O: Complete
Freezing Point °F: ~20°F
Boiling Point °F: ~212°F
Specific Gravity H₂O=1 @25° C: 1.15

Vapor Density (Air=1) 60-90° F: Like H₂O
VOC Content (% by wt.): unknown
pH @ 50-300ppm Solution: 7.5-9.0
pH as Distributed: 11.5-12.5
Appearance: Clear, yellow liquid
Odor: Mild, Phosphonate odor

IV - FIRE AND EXPLOSION

Flash Point F: None to boil TCC **Flammable Limits:** N/A
Extinguishing Media: Use media suitable for source of fire.
Special Fire Fighting Procedures: Use of a self-contained breathing apparatus is recommended.
Unusual Fire and Explosion Hazards: None known.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: Strong acids.
Hazardous Decomposition Products: Forced ignition of dried residues may produce CO, CO₂, oxides of nitrogen and phosphenes.
Conditions Contributing to Hazardous Polymerizations: Will not polymerize.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Concentrate corrosive to tissues. Eye and skin irritant.
INHALATION: Ethylene glycol fumes may cause dizziness. INGESTION: Harmful if swallowed. Excessive exposure may cause kidney and liver effects.

B. SUBCHRONIC, CHRONIC, OTHER: Ethylene glycol has caused birth defects in laboratory animals.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air and contact a physician.

EYES: Flush with water for 15 minutes and get medical attention.

SKIN: Flush with water for 15 minutes, removing contaminated clothing. If irritation persists, contact a physician.

INGESTION: Induce vomiting using a mild emetic. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Contain spills and leaks to prevent discharge to the environment. Take up on absorbent material.

Waste Disposal Methods: Keep concentrated product out of storm sewers, water sheds and water systems.

Discharge to sanitary sewer in accordance with all applicable local, state and federal regulations. In case of large spill, dispose of through authorized scavenger service. Triple rinse the plastic containers thoroughly, remove labels and tender to reconditioner or dispose of in accordance with local regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required under normal conditions of use

Eye Protection: Chemical splash goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Protective apron where potential for splashing exists.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Product will withstand occasional freezing. If frozen, thaw to room temperature and mix thoroughly (roll drum). For industrial and institutional use only.

Additional Information: Read and observe all label instructions.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Ty-Ion B-85

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Ty-Ion B-85
Synonyms: Boiler Water Treatment

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 7585

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Sodium hydroxide	1310-73-2	6	2mg/m3 (ceiling)	2mg/m3 (ceiling)

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Complete
Freezing Point °F: May Sep.blw. 45°F
Boiling Point °F: @14.7 psig psig 220°
Specific Gravity H₂O=1 @25° C: 1.20

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): @105C/2 hrs. 77%
pH @ N/A Solution: N/A
pH as Distributed: 13.5
Appearance: Brown liquid
Odor: None

IV - FIRE AND EXPLOSION

Flash Point F: None to boil **Flammable Limits:** N/A
Extinguishing Media: Suitable for fire-water, CO₂, foam, dry chemical.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: Combustion may result in generation of sulfur oxides.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable.
Incompatibility: Acidic solutions and oxidizing materials.
Hazardous Decomposition Products: CO₂ and sulfur oxides.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES & SKIN: Corrosive to tissues. Will cause burns. INHALATION: Mists are irritating to nasal and throat passages. INGESTION: Harmful if swallowed. Can burn mouth, throat and stomach.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove source of irritation and treat as for ingestion.

EYES: Flood with plenty of water for 15 minutes, get prompt medical attention.

SKIN: Flood with water, then wash with vinegar.

INGESTION: Drink large quantities of water or milk. Follow with citrus fruit juice. DO NOT INDUCE VOMITING, unless so directed by medical personnel.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Use industrial absorbent and incinerate or dispose with chemicals scavenger service. Flush residues to drain with water. May be neutralized with dilute acetic acid.

Waste Disposal Methods: As above. In case of large spill, dispose through authorized scavenger service.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: N/A

Eye Protection: Safety glasses or goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Chemical apron.

Ventilation: Local exhaust is adequate.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Keep container closed when not in use and protect from physical damage. Protect from freezing. This product is RUINED BY FREEZING. Store between 45°F and 120°F. Vent container carefully before opening. For industrial use only.

Additional Information: Read and observe labeled use instructions.

NFPA

Health Hazard: 2

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet UrinaKleen

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: UrinaKleen
Synonyms: Acid-based pipe and bowl Cleaner

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4590

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Hydrochloric Acid	7647-01-0	20	5 ppm	
VOC's = 0				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: (mm Hg) 40
Evaporation Rate: N/A
Solubility in H₂O: Complete
Freezing Point °F: N/A
Boiling Point °F: 200°F
Specific Gravity H₂O=1 @25° C:

Vapor Density (Air=1) 60-90° F:
VOC Content (% by wt.): N/A
pH @ Solution:
pH as Distributed: <1
Appearance: Blue liquid
Odor: Acid

IV - FIRE AND EXPLOSION

Flash Point F: No flash to boiling **Flammable Limits:** N/A

Extinguishing Media: Product not flammable

Special Fire Fighting Procedures: Strong alkalis, materials not resistant to strong acids, active metals (zinc, aluminum, magnesium, etc.). Avoid skin and eye contact, and breathing of acid vapors. Wear head and body protection and HCl respirator if exposure to liquid is likely

Unusual Fire and Explosion Hazards: This product can react with metals to release hydrogen gas. Firemen may need to protect against this.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable

Incompatibility: Strong alkalis, materials not resistant to strong acids, active metals (zinc, aluminum, magnesium, etc.).

Hazardous Decomposition Products: Hydrogen chloride vapors. Contact with active metals can release flammable gas.

Conditions Contributing to Hazardous Polymerizations: Does not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Corrosive. Causes eye damage. SKIN: Corrosive to tissues. Causes irritation and burns. INGESTION: Harmful if swallowed. Burns to mouth, throat, esophagus and stomach are likely. INHALATION: Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mists or liquid may cause coughing and burning.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Over exposure to product has the following effects: inhalation of vapors may cause pulmonary edema, collapse of circulatory system and damage to the upper respiratory system and collapse. Inhalation may cause coughing, throat burning, choking, bronchitis, and difficult breathing. Ingestion is harmful and may be fatal. Ingestion may cause burns.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. Give artificial respiration or oxygen if needed, and contact a physician.

EYES: Wear splash-proof goggles. Provide convenient eyewash stations. Flush immediately for 15 minutes. Get immediate medical attention.

SKIN: In case of contact, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation persists, get medical attention. Wash clothing before reuse.

INGESTION: If swallowed, DO NOT induce vomiting. Give large quantities of water or milk. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Small spills can be flushed into normal drainage or into ground with copious amounts of water, or taken up with absorbent material. For large spills, dike area and contain as much spilled material as possible, absorbing with soda ash or sodium bicarbonate. Flush with water or absorb for collection and proper disposal.

Personnel should use skin, eye and respiratory protection

Waste Disposal Methods: If neutralized, may be disposed in sewers if local regulations permit. Otherwise, send to licensed treatment and disposal facility. As supplied, this product is a RCRA hazardous waste.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Wear approved HCl vapor/mist

Eye Protection: Full face shield or goggles. **Gloves:** Rubber gloves

Other Clothing and Equipment: Wear acid-resistant protective gloves, boots and clothing. Provide convenient safety showers. Provide convenient eye wash stations.

Ventilation: Use with adequate ventilation.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Wash thoroughly after handling. Keep from contact with chlorine bleaches. Check containers daily for leaks. Have water hoses and alkaline material (soda ash) convenient. Only use containers and equipment designed for acid service.

Additional Information: Areas of use and storage should be ventilated adequately to reduce vapors below odor level. Empty containers should be rinsed well before handling and disposal.

NFPA

Health Hazard: 3

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 3

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Vacuum Pump Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Vacuum Pump Oil
Synonyms: Refined Petroleum Oil

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4383

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Blended Hydrocarbon petroleum distillate, solvent, dewaxed, heavy, severely refined paraffinic oil	64742-65-0	100%	N/A	N/A

Constituents of product are TSCA listed. VOC = 1.96% or 0.142 lbs/gallon
According to the OSHA Hazard Communications Standard, 29 CFR 1910.1200, this product contains no hazardous ingredients.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: <0.0001	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: Miscible	pH @ Solution: N/A
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: >212°	Appearance: Clear light amber liquid
Specific Gravity H₂O=1 @25° C: 0.87	Odor: Mild petroleum odor

IV - FIRE AND EXPLOSION

Flash Point F: >200°F **Flammable Limits:** N/A
Extinguishing Media: Water spray, foam, dry chemical, CO₂.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: None.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Exposure to high temperatures can produce carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYE & SKIN: On the basis of animal testing, we would not expect product to be an eye or skin irritant. INGESTION: Results from acute toxicity testing show that product would not be considered toxic as defined by the Consumer Product Safety Commission.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A. Good First Aid should be followed in all cases of exposure.

EYES: In case of eye contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.

SKIN: N/A

INGESTION: N/A

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Dispose of in accordance with federal, state and local regulations. Dike area, contain as much spilled material as possible. Remove any remaining material by absorbing on vermiculite or other suitable material and place in sealed metal container for disposal.

Waste Disposal Methods: Mix with flammable solvent and incinerate in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Not required

Eye Protection: Not required **Gloves:** Not required

Other Clothing and Equipment: Not required.

Ventilation: Local exhaust is recommended.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wash thoroughly after handling. Keep container closed. Exercise caution in the storage and handling of all chemical substances.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Weltone

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Weltone
Synonyms: Sodium Phosphate - Carbonate Mixture

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4388

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Calcium Hypochlorite	7778-54-3	4	10 ppm	N/AV
% Available Chlorine: 2.5-2.7				
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A	Vapor Density (Air=1) 60-90° F: N/A
Evaporation Rate: (ether=1): N/A	VOC Content (% by wt.): N/A
Solubility in H₂O: Complete	pH @ 10 Solution: 6.8-8.8
Freezing Point °F: N/A	pH as Distributed: N/A
Boiling Point °F: N/A	Appearance: White free-flowing powder
Specific Gravity H₂O=1 @25° C: Unknown	Odor: Chlorine odor

IV - FIRE AND EXPLOSION

Flash Point F: Non lammable **Flammable Limits:** Non flammable
Extinguishing Media: In case of fire, use water spray.
Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Respiratory protection is essential.
Unusual Fire and Explosion Hazards: May ignite combustible and organic materials. When heated to decomposition, product emits toxic fumes.

V - REACTIVITY DATA

Stability - Conditions to avoid: None known.
Incompatibility: Strong acids, combustible materials.
Hazardous Decomposition Products: Toxic fumes during heating.
Conditions Contributing to Hazardous Polymerizations: None known.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),
A. ACUTE (Primary Route of Exposure): EYES & SKIN: May cause irritation to both eyes and skin. INGESTION: May upset gastrointestinal tract.
B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.
C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A
EYES: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.
SKIN: In case of contact, flush with plenty of water for at least 15 minutes. If irritation develops, call a physician.
INGESTION: If swallowed, give milk or raw egg. Call a physician immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Sweep up spill and wash to sewer.

Waste Disposal Methods: Bury product waste in a sanitary landfill area in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing dust.

Eye Protection: Goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Rubber apron.

Ventilation: Normal.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Avoid contact with eyes, skin and clothing.

Additional Information: Wash thoroughly after handling. Exercise caution in the storing and handling of all chemical substances.

NFPA

Health Hazard: 1

Fire Hazard.....: 0

Reactivity: 0

Specific Hazard

HMIS RATING

Health Hazard..... : 1

Fire Hazard : 0

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.



MATERIAL SAFETY DATA SHEET Winter-Treat

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
554-5499

Tel No: (314) 469-7000, (800)

Address: 2008 Altom Court, St. Louis, MO 63146-4151

CHEMTREC: (800) 424-9300

Product Name: Winter-Treat

Product Number: 4390

Synonyms: Alkaline-based nitrite closed system treatment

II - HAZARDOUS INGREDIENTS OF MIXTURES

<u>MATERIAL</u>	<u>CAS#</u>	<u>% By Wt</u>	<u>TLV</u>	<u>PEL</u>
Sodium nitrite*	7632-00-0	1-10	None est	None est
Sodium polyphosphate		1-10	None est	None est
Potassium hydroxide	68915-31-	1-10	None est	None est
Sodium tolyltriazole	1	1-10	None est	None est
	1310-58-3			
	64665-57-2			

* SARA 313

All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Not available

Evaporation Rate: Like water

Solubility in H₂O: Complete

Freezing Point °F: Not available

Boiling Point °F: Not available

Specific Gravity H₂O=1 @25° C: 1.10-1.16

Vapor Density (Air=1) 60-90° F: Not available

VOC Content (% by wt.): nil

pH @ Solution: Not available

pH as Distributed: 12.0-13.0

Appearance: Clear, yellow liquid

Odor: Slight chemical odor

IV - FIRE AND EXPLOSION

Flash Point F: None. This product is an aqueous solution and is not flammable or combustible. However, the dried product is a strong oxidizer and contact with other material may cause fire.

Flammable Limits: N/AN/A

Extinguishing Media: Use extinguishing media appropriate for the surrounding fire.

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential. Use water to keep fire-exposed containers cool.

Unusual Fire and Explosion Hazards: Product emits toxic gases under fire conditions.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable - Prevent product from contacting clothing and other combustible materials.

Incompatibility: Avoid strong reducers, strong oxidizers, acids, and amines.

Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of nitrogen, phosphorus, carbon, sulfur, potassium, and sodium.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure) EYES: Contact with the eye causes severe irritation or burns. Greater exposures may result in permanent vision impairment or blindness. SKIN: Direct or prolonged contact with this product can cause severe skin irritation and possibly skin burns. Sodium nitrite may be absorbed through damaged skin in amounts that may produce systemic toxicity similar to that produced by ingestion, if the area of exposure is large. INGESTION: Ingestion of this product can cause severe irritation or burns of the mouth, throat, esophagus, and stomach. This product would be considered to be toxic by ingestion because it contains sodium nitrite and as little as one gram of sodium nitrite may be fatal to humans. Ingestion of large amounts of product may cause nausea, vomiting, headaches, cyanosis (bluish skin resulting from the reduced oxygen-carrying capacity of the blood), weakness, shortness of breath, a marked fall in blood pressure, collapse, convulsion, coma, and possibly death. Nitrites have been shown to convert in the stomachs of lab animals to potentially carcinogenic nitrosamines. Repeated small doses of nitrites cause a fall in blood pressure, rapid pulse, headache, and visual disturbances. Nitrites have been implicated in an increased incidence of cancer. They may react with organic amines in the body to form carcinogenic nitrosamines. Repeated or prolonged exposure to nitrites may cause methemoglobinemia (decreased oxygen-carrying capacity of the blood). Pregnant women should minimize exposure to nitrites since the developing fetus may be adversely affected by the nitrite-induced methemoglobinemia. This product contains sodium polyphosphate. Phosphates are slowly and incompletely absorbed when ingested, and seldom result in systemic effects. Such effects, however, have occurred. Symptoms may include nausea, vomiting, diarrhea, lethargy, blood chemistry effects, cardiac effects, and central nervous system effects. The toxicity of phosphates is because of their ability to sequester calcium. Chronic ingestion or inhalation of sodium polyphosphate may induce systemic phosphorous poisoning. Liver damage, kidney damage, jaw/tooth abnormalities, blood disorders, and cardiovascular effects can result. INHALATION: Inhalation of product mist may be severely irritating to the respiratory tract. Inhalation of sodium nitrite may cause systemic effects, as nitrites are readily absorbed by lung tissue.

B. SUBCHRONIC, CHRONIC, OTHER: No applicable information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Due to the high pH of this product, pre-existing conditions of the eye, skin, and respiratory tract may be aggravated by overexposure to this product. Individuals with pre-existing diseases of the cardiovascular system and bone marrow may have increased susceptibility to the toxic effects of exposure to nitrites.

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If inhalation occurs, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, have a trained medical person give oxygen. Seek medical aid.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids to ensure complete rinsing. Seek medical aid immediately.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek medical aid. Wash clothing and clean shoes before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Give large quantities of water if victim is conscious and alert. Never give anything by mouth to an unconscious person. Seek medical aid immediately.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Keep unnecessary and unprotected people away from the spill site. Ventilate the area of the spill. Wear appropriate personal protective equipment, contain the spill, recover as much liquid as possible, collect the residue onto an inert, non-combustible absorbent, like sand or earth, and place the used absorbent in a suitable container. Prevent spilled material from entering sewers or waterways. Dispose of recovered liquid, if unusable, and used absorbent according to federal, state, and local regulations

Waste Disposal Methods: Dispose of in accordance with local, state, and federal regulations.

RCRA STATUS: Discarded product, as sold, would be considered a RCRA Hazardous Waste based on the characteristic of corrosivity. The EPA Hazardous Waste Number is D002.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134)

Eye Protection: Chemical splash goggles and face shield. **Glove:** Chemical resistant gloves and protective clothing.

Other Clothing and Equipment: An eye wash station and safety shower should be accessible in the immediate area of use.

Ventilation: A system of local and/or general exhaust is recommended to keep employee exposures below irritating levels or airborne exposure limits, whichever is lower. Local exhaust ventilation is preferred because it can control emissions of the contaminant at its source, preventing dispersion of it into the general work area.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: HANDLING: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist.

Use with adequate ventilation. Wash thoroughly after handling. Keep containers closed when not in use. Prevent product from contacting organic materials, oils, greases, and any oxidizable materials. STORAGE: Store in a cool, dry, well-ventilated area away from incompatible materials. Do not store near strong acids. Do not store near combustible materials.

Additional Information: DANGER: Cause eye and skin irritation or burns. Harmful if swallowed or if mist is inhaled. Dried product residue can act as an oxidizer.

NFPA

Health Hazard.....: 3

Fire Hazard.....: 0

Reactivity.....: 1

Specific Hazard....:

HMIS RATING

Health Hazard.....: 3

Fire Hazard.....: 0

Reactivity.....: 1

Personal Protection...: X (Sec. 9)

Revision Date: 06/22/2006

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Material Safety Data Sheet Zerol 150 Refrigeration Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Zerol 150 Refrigeration Oil
Synonyms: Refrigeration Fluid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4310

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Alkyl Benzene	68855-24-3	100	N/A	N/A

All ingredients appear on the Inventory of Chemical Substances published by the EPA under authority of the Toxic Substances Control Act (TSCA)
Approx Dielectric Constant: 2.1 (air=1)(non-additized oil)
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/AV
Boiling Point °F: 315°C
Specific Gravity H₂O=1 @25° C: 0.87

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ N/AV Solution: N/AV
pH as Distributed: N/AV
Appearance: Water white liquid
Odor: Characteristic

IV - FIRE AND EXPLOSION

Flash Point F: (COC) 311°F (MIN) **Flammable Limits:** N/A
Extinguishing Media: CO₂, dry chemical, foam, water fog.
Special Fire Fighting Procedures: For fires involving this material, do not enter any closed or confined fire space without proper protection equipment. This may include self-contained breathing apparatus to protect against the hazardous effect of normal products of combustion or oxygen deficiency. Read entire MSDS.
Unusual Fire and Explosion Hazards: N/AV

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: May react with strong oxidizing materials.
Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Applications into the eyes of rabbits produced slight membrane irritation without corneal injury. SKIN: Product may cause skin irritation on prolonged or frequently repeated contact. Application onto the skin of rabbits produced moderate erythema and edema. INGESTION: Not expected to be acutely toxic. (ORAL LD50 Rats >5g/kg). INHALATION: Not acutely toxic.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. If irritation persists, see a doctor.

SKIN: Wash skin thoroughly with soap and water. See a doctor if rash or burn occurs. Launder contaminated clothing.

INGESTION: If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest emergency treatment center or hospital.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or ground water. Clean up small spills with absorbent material and remove contaminated soil. Report and respond to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local authorities for approved disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None normally required

Eye Protection: Safety goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Wear impervious clothing.

Ventilation: N/AV

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or explosion may result.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Zerol 200TD Refrigeration Oil

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Zerol 200TD Refrigeration Oil
Synonyms: Alkylbenzene Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4308

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Alkyl Benzene	68855-24-3	100	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: 0.001
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/AV
Boiling Point °F: 319°C
Specific Gravity H₂O=1 @25° C: 0.87

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ N/AV Solution: N/AV
pH as Distributed: N/AV
Appearance: Water white to amber liquid
Odor: Characteristic hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: 347°F (COC) 175°C **Flammable Limits:** N/A

Extinguishing Media: CO₂, dry chemical, foam, water fog.

Special Fire Fighting Procedures: For fires involving this material, do not enter any closed or confined fire space without proper protection equipment. This may include self-contained breathing apparatus to protect against the hazardous effect of normal products of combustion or oxygen deficiency. Read entire MSDS.

Unusual Fire and Explosion Hazards: N/AV.

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable

Incompatibility: May react with strong oxidizing materials.

Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Applications into the eyes of rabbits produced slight membrane irritation without corneal injury. SKIN: Product may cause skin irritation on prolonged or frequently repeated contact. Application onto the skin of rabbits produced moderate erythema and edema. INGESTION: Not expected to be acutely toxic. (ORAL LD50 Rats >5g/kg). INHALATION: Not acutely toxic.

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. If irritation persists, see a doctor.

SKIN: Wash skin thoroughly with soap and water. See a doctor if rash or burn occurs. Launder contaminated clothing.

INGESTION: If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest emergency treatment center or hospital.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or ground water. Clean up small spills with absorbent material and remove contaminated soil. Report and respond to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local authorities for approved disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing mist or vapor. Use NIOSH/MSHA approved respiratory equipment when airborne exposure is excessive.

Eye Protection: Safety glasses **Gloves:** Disposable

Other Clothing and Equipment: Wear impervious clothing.

Ventilation: Mechanical ventilation is recommended if handling at elevated temperatures or if handled in such a manner as to cause mists or vapor to form.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or explosion may result.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet

Zerol 300

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Zerol 300
Synonyms: Refrigeration Fluid

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4311

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Alkyl Benzene	688-55-24-3	100	N/A	N/A
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: mm Hg: N/A
Evaporation Rate: (ether=1): N/A
Solubility in H₂O: Insoluble
Freezing Point °F: N/AV
Boiling Point °F: 315°C
Specific Gravity H₂O=1 @25° C: 0.87

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ N/AV Solution: N/AV
pH as Distributed: N/AV
Appearance: Water white liquid
Odor: Characteristic

IV - FIRE AND EXPLOSION

Flash Point F: (COC) 311°F (MIN) **Flammable Limits:** N/A

Extinguishing Media: CO₂, dry chemical, foam, water fog.

Special Fire Fighting Procedures: For fires involving this material, do not enter any closed or confined fire space without proper protection equipment. This may include self-contained breathing apparatus to protect against the hazardous effect of normal products of combustion or oxygen deficiency. Read entire MSDS.

Unusual Fire and Explosion Hazards: N/AV

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable

Incompatibility: May react with strong oxidizing materials.

Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Expected to cause no more than minor eye irritation. Application of similar material into the eyes of rabbits produced slight membrane irritation without corneal injury. SKIN: Not a primary skin irritant, but may cause skin irritation on prolonged or frequently repeated contact. Application of a similar material onto the skin of rabbits produced slight erythema and edema. INHALATION: Avoid breathing mist or vapor. Prolonged exposure to vapors may cause dizziness and headache. Under normal use conditions, product is not an inhalation hazard INGESTION: May cause nausea. Not expected to be acutely toxic by ingestion..

B. SUBCHRONIC, CHRONIC, OTHER: No available information was found.

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: N/A

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. If irritation persists, see a doctor.

SKIN: Wash skin thoroughly with soap and water. See a doctor if irritation persist. Launder contaminated clothing.

INGESTION: If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest emergency treatment center or hospital.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or ground water. Clean up small spills using appropriate techniques with absorbent material. Remove contaminated soil and report and respond to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local authorities for approved disposal.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: None normally required

Eye Protection: Safety goggles **Gloves:** Rubber gloves

Other Clothing and Equipment: Impervious protective clothing.

Ventilation: Ventilation may be needed.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or explosion may result.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 12/14/06
<u>Product Name</u> Zerol 400CA	<u>Product Number</u> 4311-65	<u>Product Use</u> Lubricant		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Alkylaryl Hydrocarbon	96.7	68855-24-3	No Data.	No Data.
Butylated Triphenyl Phosphate Ester	3	115-86-6	No Data.	No Data.
Dibutyl Paracresyl (DBPC)	0.3	No Data.	No Data.	No Data.

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Triphenyl Phosphate, which comprises 0.75-0.9% of this product has been reported to be a cholinesterase inhibitor in humans. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms, and follow the advice given. Exposure to this product may cause cholinesterase inhibition. If cholinesterase inhibition is suspected, atropine by injection is antidotal. 2-PAM (Protopam Chloride) is also antidotal when administered early and in conjunction with atropine.

Potential Health Effects

Eyes: Expected to cause no more than minor eye irritation. Application of a similar product into the eyes of rabbits produced very slight membrane irritation without corneal injury. Avoid eye contact as good industrial practice.

Skin: Not a primary skin irritant but may cause skin irritation on repeated or prolonged contact. Application of a similar product onto the skin of rabbits slight erythema and edema. The Draize score was 0.6. Not expected to be acutely toxic by skin absorption. The acute dermal LD50 (rabbits) was greater than 5g/kg for a similar product.

Ingestion: May cause nausea. Not expected to be acutely toxic by ingestion. The acute oral LD50 (rat) was greater than 5 g/kg for a similar product.

Inhalation: Avoid breathing vapor or mist. Under normal conditions, this product is not an inhalation hazard. Prolonged exposure to vapors may cause dizziness and headaches.

Chronic Exposure: No Data.

Carcinogenicity: No Data.

Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding the eyelids open. If irritation persists, see a physician.

Skin: Remove contaminated clothing. Wash skin thoroughly with soap and water. Launder contaminated clothing. See doctor if irritation persists.

Ingestion: If swallowed, call a physician immediately. ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. If medical advice cannot be obtained, take the person, product container and MSDS to the nearest medical emergency center.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration and seek medical attention immediately. Remove material from eyes, skin and clothing.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: 175°C/347 °F

Autoignition Temp: 427°C/800°F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: No Data.

Extinguishing Media: CO2, Dry chemical, foam, water fog.

Fire and Explosion Hazards: No Data.

Special Firefighting Procedures: Cool exposed equipment with water spray. Firefighters and others exposed to vapors or products of combustion should use selfcontained breathing apparatus and wear full protective clothing.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: This material is not expected to present any environmental problems other than those normally associated with oil spills. Contain spills & leaks to prevent discharge to the environment. Absorb spill with inert material, then place in a chemical waste container. For large spills dike for later disposal. U.S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spills to Coast Guard toll free number (800) 424-8802.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: No Data.

Storage Requirements: No Data.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory equipment when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application.

Eye Protection: No special eye protection is necessary. Avoid eye contact as good industrial practice.

Protective Clothing: Avoid prolonged or frequently repeated contact. Skin contact can be minimized by wearing impervious protective clothing including gloves.

Exposure Guidelines: No Federal OSHA PEL or ACGIM TLV has been established for this material. However, the product contains triphenyl phosphate (0.9% max.) for which the following exposure limits apply: The Federal OSHA Permissible Exposure Limit (PEL) is 3mg/m3 as an 8-hour time-weighted average. The American Conference of Governmental Industr

Specific Engineering Controls (such as ventilation, enclosed process): Mechanical ventilation is recommended if handling at elevated temperatures or if it is handled in such a manner as to cause mists or vapor to form.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Oily Liquid	Freezing Point: No Data.°C/No Data.°F	% Volatile by Weight: No Data.%
Color: Water-white to yellowish amber	Vapor Density [air =1]: No Data.	Evaporation Rate: No Data.
Odor: slight hydrocarbon odor	Vapor Pressure: (mm Hg @ 40° C) LT0.001	Specific Gravity: 0.88
Boiling Point: 322°C/612°F	Solubility in Water: insoluble	pH (concentrate): No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable (Thermal, Light)

Hazardous Polymerization: Will not occur.

Incompatibilities: May react with strong oxidizing materials.

Reactive Conditions to avoid: No Data.

Decomposition Products: Normal combustion of alkylaryl hydrocarbon forms carbon dioxide & water vapor. Incomplete combustion can form carbon monoxide. Butylated triphenyl phosphate hydrolyzes slowly at ambient temperatures when exposed to wet alkaline or acidic conditions. Also hydrolyzes at temperatures of 150°F(66°C) or greater when exposed to atmospheric moisture. Upon hydrolysis, phenol, substituted phenols & phosphoric acids are formed.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
No Data.				

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
	96-hr LC50 Rainbow trout (<i>Salmo gairdneri</i>): >1000mg/l practically non-toxic. 96-hr LC50 Sheepshead Minnow (<i>Cyprinodon variegatus</i>): >1000mg/l practically non-toxic
	Biodegradation: This material has not been tested for biodegradation. It is expected to be resistant.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Discarded product should be incinerated or disposed of only in accordance with local, state and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Electronic Accumulation Hazard: When transferring this product, There is a potential for the accumulation of static electricity. Consideration should be given to bonding & grounding of equipment during loading, unloading and transfer of this product. U.S. Surface Freight Classification: Petroleum Alkylate Detergent Intermediate (Petroleum Oil, N.O.I.B.N.)

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	No Data.	No Data.	No Data.	No Data.
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	No Data.
SARA Title III: (Superfund Amendments & Reauthorization Act)	N/A
OSHA: (Occupational Safety & Health Administration)	Non hazardous
TSCA: (Toxic Substance Control Act)	Benzene C14-C30 alkyl derivatives appear on the Inventory of chemical Substances published by the U.S. EPA under authority of the TSCA.
VOC: (volatile Organic Compounds)	No Data.
CPR: (Canadian Controlled Products Regulations)	No Data.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
HFPA (HMIS) Rating: (Hazardous Materials Identification System)	No Data.

SECTION 16 – OTHER INFORMATION

Average Molecular Weight: 410 (typical); Viscosity (cSt @ 40°C) 70-80; Pour Point (°C) -40

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



Material Safety Data Sheet

Zerol 500

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Zerol 500
Synonyms: Alkylbenzene Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4312

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Alkyl Benzene (heavy alkylate)	688-55-24-3	100	None	None
All ingredients are TSCA listed.				

III - PHYSICAL DATA

Vapor Pressure: 0.001 mmHg @ 40°C
Evaporation Rate: N/A
Solubility in H₂O: Insoluble in water
Freezing Point °F: N/A
Boiling Point °F: 326°C
Specific Gravity H₂O=1 @25° C: 0.87

Vapor Density (Air=1) 60-90° F: N/A
VOC Content (% by wt.): N/A
pH @ Solution: N/A
pH as Distributed: 7.0-8.0
Appearance: Water white to light amber liquid
Odor: Slight hydrocarbon odor

IV - FIRE AND EXPLOSION

Flash Point F: 17°C **Flammable Limits:** LEL=Unk UEL=Unk
Extinguishing Media: CO₂, dry chemical, foam, water fog
Special Fire Fighting Procedures: Cool exposed equipment with water spray. For fires involving this material, do not enter any closed or confined fire space without proper protection equipment. This may include self-contained breathing apparatus to protect against the hazardous effect of normal products of combustion or oxygen deficiency.
Unusual Fire and Explosion Hazards: N/A

V - REACTIVITY DATA

Stability - Conditions to avoid: Product is stable
Incompatibility: May react with strong oxidizing materials
Hazardous Decomposition Products: Normal combustion forms CO₂ and water vapor. Incomplete combustion can form CO.
Conditions Contributing to Hazardous Polymerizations: Will not occur

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Expected to cause no more than minor eye irritation. Application of similar material into the eyes of rabbits produced slight membrane irritation without corneal injury. Avoid eye contact as good industrial practice SKIN: Not a primary skin irritant, but may cause skin irritation on prolonged or frequently repeated contact. Application of a similar material onto the skin of rabbits produced slight erythema and edema. The Draize score was 0.6. Not expected to be acutely toxic to skin by skin absorption. The acute dermal LD50 (rabbits) was greater than 5g/Kg for a similar product. INHALATION: Avoid breathing vapor or mist. Under normal use condition, this product is not an inhalation hazard. Prolonged exposure to vapors may cause dizziness and headaches. INGESTION May cause nausea. Not expected to be acutely toxic by ingestion. The acute oral LD50 (rat) was greater than 5g/kg for a similar product.

B. SUBCHRONIC, CHRONIC, OTHER: None

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration and seek medical attention immediately.

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. If irritation persists, see a doctor.

SKIN: Wash skin thoroughly with soap and water. See a doctor if irritation persists. Launder contaminated clothing.

INGESTION: If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest emergency treatment center or hospital.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or ground water. Clean up small spills using appropriate techniques with absorbent material. Remove contaminated soil and report and respond to larger releases.

Waste Disposal Methods: Discarded product should be incinerated or disposed of only in accordance with local, state and federal regulations.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Avoid breathing mist or vapor. Use NIOSH/MSHA approved respiratory equipment when airborne exposure is excessive.

Eye Protection: Safety glasses **Gloves:** Rubber gloves

Other Clothing and Equipment: Impervious protective clothing.

Ventilation: Mechanical ventilation is recommended if handling at elevated temperatures or if it is handled in such a manner as to cause mists or vapor to form.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Do not weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or explosion may result.

Additional Information: Read and observe all label precautions.

NFPA

Health Hazard: 0

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard..... : 0

Fire Hazard : 1

Reactivity : 0

Personal Protection.... : X (Sec. 9)

Revision Date: 8/6/2004

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Material Safety Data Sheet Zerol Ice

I - PRODUCT IDENTIFICATION

Company Name: Nu-Calgon Wholesaler, Inc.
Address: 2008 Altom Court, St. Louis, MO 63146-4151
Product Name: Zerol Ice
Synonyms: Lubricant

Tel No: (314) 469-7000, (800) 554-5499
CHEMTREC: (800) 424-9300
Product Number: 4312-50

II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIAL	CAS#	% By Wt	TLV	PEL
Lubricant		55-75		
Propellant, 1-chloro, 2,3-fluoro methane		25-45		

Composition/specific chemical identities are withheld as a trade secret under the provisions of OSHA Hazard Communication Standard 29 CFR 1910.1200.
All ingredients are TSCA listed.

III - PHYSICAL DATA

Vapor Pressure: Not determined
Evaporation Rate:
Solubility in H₂O: Negligible
Freezing Point °F: Not determined
Boiling Point °F: 300°C at atmospheric pressure
Specific Gravity H₂O=1 @25° C: 1.05

Vapor Density (Air=1) 60-90° F: Not determined
VOC Content (% by wt.):
pH @ Solution: Not applicable
pH as Distributed:
Appearance: Clear liquid lubricant
Odor: Oil odor

IV - FIRE AND EXPLOSION

Flash Point F: >200°C; (COC) **Flammable Limits:** Not determined Not determined
Extinguishing Media: Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.
Special Fire Fighting Procedures: Wear full protective clothing and positive pressure breathing apparatus.
Unusual Fire and Explosion Hazards: None

V - REACTIVITY DATA

Stability - Conditions to avoid: Stable
Incompatibility: May react with strong oxidizing materials
Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor. Incomplete combustion can form carbon monoxide.
Conditions Contributing to Hazardous Polymerizations: Will not occur.

VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),

A. ACUTE (Primary Route of Exposure): EYES: Expected to cause no more than minor eye irritation. Application of a similar product into the eyes of rabbits produced very slight membrane irritation without corneal injury. Avoid eye contact as good industrial practice. SKIN: Not a primary skin irritant but may cause skin irritation on repeated or prolonged contact. Application of a similar onto the skin of rabbits produced slight erythmia and edema. INHALATION: Avoid breathing vapor or mist. Under normal use conditions, this product is not an inhalation hazard. Prolonged exposure to vapors may cause dizziness and headaches. INGESTION: May cause nausea. Not expected to be acutely toxic by ingestion.

B. SUBCHRONIC, CHRONIC, OTHER:

C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration and seek medical attention immediately. Remove material from eyes, skin and clothing.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding the eyelids open. If irritation persists, see a physician.

SKIN: Remove contaminated clothing. Wash skin thoroughly with soap and water. Launder contaminated clothing. See a doctor if irritation persists.

INGESTION: If swallowed, call a physician immediately. ONLY induce vomiting at the direction of a physician. Never give anything by mouth to an unconscious person. If medical advice cannot be obtained, take the person, product container and MSDS to the nearest medical emergency center.

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Ventilate area. Avoid breathing vapor. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin and clothing.

Waste Disposal Methods: This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

IX - PROTECTION INFORMATION/CONTROL MEASURES

Respiratory: Airborne concentrations should be kept to lowest levels possible. If vapor, dust or mist is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air-supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

Eye Protection: Safety glasses, chemical type goggles or face shield recommended to prevent eye contact.

Gloves: Chemical resistant gloves.

Other Clothing and Equipment: Dry cleaning of contaminated clothing may be more effective than normal laundering. Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing.

Ventilation: Local exhaust ventilation recommended if generating vapor, dust or mist. If exhaust ventilation is not available or adequate, use NIOSH or MSHA approved respirator as appropriate. No exposure limit has been established for the product.

X - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing: Wear protective clothing where possible. Launder as required. Skin exposed to product should be washed several times daily with soap and water.

Additional Information: None

NFPA

Health Hazard: 1

Fire Hazard.....: 1

Reactivity: 0

Specific Hazard:

HMIS RATING

Health Hazard.....: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection....: X (Sec. 9)

Revision Date: 8/6/2004

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