

Material Safety Data / Fiche signalétique

WESTCOAST DRILLING SUPPLIES LTD.
8069 River Way, Delta, British Columbia,
Canada V4G 1L3
Ph. (604) 940-6050 Fax (604) 940-6080

EMERGENCY 1-800-665-6645

550X® POLYMER

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SECTION V: PHYSICAL DATA

| | |
|----------------------------|----------------------|
| APPEARANCE | White granular solid |
| ODOR | None |
| SPECIFIC GRAVITY | 0.8 at 25° C (77 F) |
| BOILING POINT (°C) | Not applicable |
| MELTING POINT (°C) | Not determined |
| SOLUBILITY IN WATER | Forms a gel |
| PERCENT VOLATILE BY VOLUME | Not determined |
| EVAPORATION RATE | Not determined |
| VAPOR PRESSURE (mm Hg) | Not determined |
| VAPOR DENSITY (Air=1) | Not determined |
| pH | 4 - 9 @ 5g/L |

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

| | |
|------------------------------------|--|
| FLASH POINT | 93° C (200 F) |
| FLAMMABLE LIMITS | Not determined |
| EXTINGUISHING MEDIA | Dry Chemical, Carbon Dioxide |
| SPECIAL FIRE FIGHTING PROCEDURES | Aqueous solutions or powders that become wet render surfaces extremely slippery. |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | No special equipment required. |

SECTION VII: REACTIVITY DATA

| | |
|---------------------------------------|------------------------------------|
| STABILITY | [XXX] Stable [] Unstable |
| INCOMPATIBILITY (Conditions to avoid) | Oxidizing agents |
| CONDITIONS OF REACTIVITY | Not known |
| HAZARDOUS DECOMPOSITION PRODUCTS | NO _x , CO _x |
| HAZARDOUS POLYMERIZATION | [XXX] Will not occur [] May occur |

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SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

| | |
|--------------------------------------|--|
| RESPIRATORY PROTECTION | Dust masks are recommended where concentration of total dust is more than 10 mg/m ³ |
| VENTILATION | General mechanical |
| PROTECTIVE GLOVES | Chemically resistant |
| EYE PROTECTION | Safety glasses with side shields |
| OTHER PROTECTIVE EQUIPMENT (Specify) | Not known |

ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED**

Do not flush with water. Clean up promptly by sweeping or vacuum.
Keep in suitable and closed containers for disposal.
After cleaning, flush away trace with water.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wash hands before breaks and at the end of the day. Keep in a cool dry place (0 - 30 °C)

WASTE DISPOSAL METHOD

Can be land filled or incinerated, when in compliance with local, provincial and federal regulations.

SECTION IX: TOXICOLOGICAL INFORMATION

| | |
|------------------------|---|
| CARCINOGENICITY | Not determined |
| REPRODUCTIVE TOXICITY | Not determined |
| TERATOGENICITY | Not determined |
| MUTAGENICITY | Not determined |
| DEVELOPMENTAL TOXICITY | Not determined |
| CHRONIC EFFECTS: | This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. |

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550X POLYMER

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SECTION X: PREPARATION

The information contained herein is given in good faith, but no warranty, expressed or implied is made.

DATE ISSUED: August, 2001

DATE REVISED: August, 1998

BY: Product Safety Committees

AMENDMENT HAZARDOUS INGREDIENTS (550X)

| Material or component | WT% | Hazard data |
|----------------------------------|-----|--------------------------|
| COPOLYACRYLAMIDE/SODIUM ACRYLATE | | Not considered hazardous |

ENVIRONMENTAL

| | | |
|--|---|--|
| DEGRADABILITY/AQUATIC TOXICITY: | Not determined | |
| OCTANOL/WATER PARTITION COEFFICIENT | Not determined | |
| WASTE DISPOSAL METHODS: | Incineration and/or disposal in Chemical Landfill. Disposer must comply with federal, provincial and local disposal or discharge laws. | |
| RCRA STATUS OF UNUSED MATERIAL IF DISCARDED: | Not a "Hazardous Waste" | |
| HAZARDOUS WASTE NUMBER: | Not available | |
| REPORTABLE QUANTITY: | EPA 40 CFR (CERCLA 102): | Not applicable |
| THRESHOLD PLANNING QUANTITY: | EPA 40 CFR 355 (SERA 301-304): | Not applicable |
| TOXIC CHEMICAL RELEASE REPORTING: | EPA 40 CFR 372 (SERA 311-313): | Not applicable |
| EPA HAZARD CLASSIFICATION CODE: | ACUTE - Yes FIRE - No | CHRONIC - No PRESSURE - No REACTIVE - No |
| HMIS AND NFPA RATINGS: | HMIS | NFPA |
| HEALTH | 1 | 1 |
| FLAMMABILITY | 0 | 0 |
| REACTIVITY | 1 | 1 |
| SPECIAL | Not applicable | Not applicable |

SECTION IX: PREPARATION

The information contained herein is given in good faith, but no warranty, expressed or implied is made.

DATE ISSUED: January 1, 1991

DATE REVISED: April 1, 2000

BY: Product Safety Committees

Review date: *March 31/03*

Authorized by: *Alan Leland*

Material Safety Data / Fiche signalétique**WESTCOAST DRILLING SUPPLIES LTD.**

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EMERGENCY 1-800-665-6645

SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME: **W-OB POLYMER**
PRODUCT USE: Drilling Mud Additive
CHEMICAL FAMILY: Polysaccharide Polymer
WHMIS CLASSIFICATION: Class B-3 & D-2(B)
WORK PLACE HAZARD: Combustible and Skin and Eye Irritant

TRANSPORTATION OF DANGEROUS GOODS (TDGR)

CLASSIFICATION: Not Dangerous Goods
PACKAGE GROUP: Not applicable
PRODUCT IDENTIFICATION NUMBER (PIN): Not applicable

SECTION II: HAZARDOUS INGREDIENTS

| INGREDIENT | PERCENTAGE | CAS NUMBER | LD50 | LC50 |
|--------------------------|------------|------------|----------------|------|
| Light mineral distillate | 10 - 20% | 64742-47-8 | Not determined | |

SECTION III: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:
[XXX] Skin, [XXX] Eye Contact, [XXX] Inhalation, [XXX] Ingestion

THRESHOLD LIMIT VALUE: 5 mg/cu.M/8 hrs.
EFFECTS OF OVEREXPOSURE: No significant signs or symptoms indicative of any adverse health effects are expected to occur upon short-term exposures.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: Remove by wiping; then wash thoroughly with plenty of soap and water.
EYE CONTACT: Flush eyes with clean, low pressure water for at least fifteen (15) minutes, occasionally lifting the eyelids. If pain or redness persists after flushing, obtain medical attention.
INHALATION: Immediately remove personnel from contaminated area to fresh air. Obtain medical attention if there are signs of breathing difficulties.
INGESTION: Do not induce vomiting, since aspiration into the lungs could cause lipoid pneumonia. This material is not toxic and no significant signs or symptoms indicative of any adverse health effects are expected.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOR: Opaque, blue liquid; Odorless.
DENSITY (SPECIFIC GRAVITY): 1.03
BOILING POINT: 200° C
MELTING POINT: Not applicable
WATER SOLUBILITY: Soluble
% VOLATILE BY VOLUME: Negligible
EVAPORATION RATE: Nil
VAPOR PRESSURE: (mm Hg) < 1.0
VAPOR DENSITY: (Air = 1) > 10.0
pH: 6 - 8

**WESTCOAST DRILLING SUPPLIES LTD.**

8099 River Way, Delta, British Columbia, Canada V4G 1L3

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W-OB POLYMER

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SECTION VI: FIRE AND EXPLOSION HAZARD DATA

| | |
|-------------------------------------|--|
| FLASH POINT: | 62° C |
| FLAMMABLE LIMIT: | Auto-ignition Temp. 227° C |
| EXTINGUISHING MEDIA: | Dry chemical, CO ₂ , foam and water are effective but may cause frothing. |
| SPECIAL FIRE FIGHTING PROCEDURES: | Cool tanks and containers exposed to fire with water. |
| UNUSUAL FIRE AND EXPLOSION HAZARDS: | To protect against hazardous effects of combustion products respiratory protective equipment when in confined spaces or down wind of fire. |

SECTION VII: REACTIVITY DATA

| | |
|--|------------------------------------|
| STABLE [XXX] INSTABLE [] | |
| INCOMPATIBILITY (CONDITIONS TO AVOID): | Extreme heat and open flame. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | Carbon dioxide; carbon monoxide. |
| HAZARDOUS POLYMERIZATION: | Will not occur [XXX] May occur [] |

SECTION VIII: PREVENTATIVE MEASURES

| | |
|---------------------------------|--|
| SPECIAL PROTECTION INFORMATION: | |
| RESPIRATORY PROTECTION: | None required under normal conditions. |
| VENTILATION: | Adequate ventilation to minimize oil mists below acceptable standards. |
| PROTECTIVE GLOVES: | None required. |
| EYE PROTECTION: | Normal safety glasses suggested. |
| OTHER PROTECTIVE EQUIPMENT: | None required. |

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

(Use appropriate safety equipment). Small spills, soak up with absorbent material. Large spills, dike to contain spill to prevent water pollution. Water will cause extreme slipperiness. Recover diked material; return recovered material to plant.

WASTE DISPOSAL METHOD:

Absorb spilled material with absorbent compound, incinerate/dispose to conform with local disposal regulations.

SECTION IX: PREPARATION

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DATE ISSUED: October 29, 1993

BY: Product Safety Committee

DATE REVISED: April 1, 2000

Review date:

Authorized by:

3/1/03
Alan Lalonde

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EMERGENCY 1-800-665-6645

SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME: DR-133 POLYMER
PRODUCT USE: Drilling Mud Additive
CHEMICAL FAMILY: Copolymer of Acrylamide with Sodium Acrylate
WHMIS CLASSIFICATION: B-3, D-2B
WORK PLACE HAZARD: Combustible liquid, Toxic material

(TDG TRANSPORTATION OF DANGEROUS GOODS)

TDG CLASSIFICATION: Not regulated by TDG

SECTION II: HAZARDOUS INGREDIENTS

| INGREDIENT | PERCENT | CAS NUMBER | LD ₅₀ (oral rat) | LD ₅₀ (Dermal rabbit) |
|----------------------------|---------|------------|-----------------------------|----------------------------------|
| Mineral Spirits | 20-40 | 64742-47-8 | >5 g/kg | >3 g/kg |
| Alkyl phenol ethoxylate | 3-7 | 68412-54-4 | 3000 mg/kg | 4400 mg/kg |
| Ethoxylated C12-15 Alcohol | 1-5 | 68131-39-5 | >3200 mg/kg | >2000 mg/kg |

SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XXX] Skin XXX] Eye Contact [] Inhalation [XXX] INGESTION

SKIN CONTACT: Contact can cause irritation, redness, swelling or dermatitis.
EYE CONTACT: Will cause painful burning or stinging of eyes and lids, watering of eyes, and inflammation of conjunctiva.
INHALATION: Not available.
INGESTION: May cause nausea, diarrhea, abdominal cramps and vomiting.
EFFECTS OF CHRONIC EXPOSURE: Skin irritation or dermatitis may occur upon frequent or prolonged exposure.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: In case of skin contact, immediately flush contacted area for at least 15 minutes with water. Remove contaminated clothing immediately and launder before reuse.
If irritation develops consult a doctor.

EYE CONTACT: In case of contact with eyes, flush with water for at least 15 minutes.
Seek immediate medical attention.

INHALATION: Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult give oxygen.
Seek medical attention.

INGESTION: If victim is conscious, give water.
Do not induce vomiting.
Seek immediate medical attention

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DR-133 POLYMER

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SECTION V: PHYSICAL DATA

| | |
|----------------------------|----------------------------|
| APPEARANCE AND ODOR | : Liquid emulsion |
| SPECIFIC GRAVITY | : Not available |
| BOILING POINT (°C) | : Not available |
| MELTING POINT (°C) | : Not available |
| SOLUBILITY IN WATER | : Soluble |
| pH | : 7.0 - 9.0 (0.6% in D.W.) |
| PERCENT VOLATILE BY VOLUME | : Not available |
| EVAPORATION RATE | : Not available |
| VAPOR PRESSURE (mm Hg) | : Not available |
| VAPOR DENSITY (Air = 1) | : Not available |

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

| | |
|--|--|
| FLASH POINT (°C): | : 70°C |
| FLAMMABLE LIMITS: | : Not available |
| EXTINGUISHING MEDIA | : Water, dry chemical, foam, carbon dioxide, Water will cause extreme slipperiness. |
| SPECIAL FIRE FIGHTING PROCEDURES | : Self-contained respirators required for fire fighting personnel. |
| UNUSUAL FIRE AND EXPLOSION HAZARDS: | : sensitivity to static discharge. |

SECTION VII: REACTIVITY DATA

| | | |
|---------------------------------------|--|---------------|
| STABILITY: | Stable [XXX] | Unstable [] |
| INCOMPATIBILITY (MATERIALS TO AVOID): | Strong oxidizing agents and reducing agents. | |
| HAZARDOUS DECOMPOSITION PRODUCTS : | Not available | |
| HAZARDOUS POLYMERIZATION | Will not occur [XXX] | May occur [] |

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DR-133 POLYMER

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SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

| | |
|---------------------------------------|---|
| RESPIRATORY PROTECTION: | In absence of proper ventilation, recommend approved organic vapor-type respirator. |
| VENTILATION: | 10 changes per hour suggested. |
| PROTECTIVE GLOVES: | Suggest plastic or rubber |
| EYE PROTECTION: | Goggles |
| OTHER PROTECTIVE EQUIPMENT (Specify): | Suggest rubber apron |

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep container closed when not in use.
Store in a cool and dry location away from oxidizing and reducing agents.

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED

Eliminate sources of ignition.
Collect into waste container.
Absorb remaining product with earth or sand and dispose of with solid waste.
Wash spill site after material pickup.
Do not breath vapours.
Water will cause extreme slipperiness.
Use NIOSH approved respirator if exposed to vapours.

WASTE DISPOSAL METHOD

Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material.
Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures.

SECTION IX: PREPARATION

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SUPERSEDES: October 29, 1993
DATE ISSUED: April 1, 2000

BY: Product Safety Committee

DATE REVISED: June, 2000

Review date:

Authorized by:

March 31/03
Alan LeBlond



Revised February 15, 2002

MSDS

Material Safety Data Sheet

PRODUCT NAME: PORTLAND CEMENT

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Supplier
Name: Lafarge North America Inc.
Address: 12950 Worldgate Drive, Suite 500
 Herndon, VA 20170
Telephone: 703-480-3600

Product Identifier

Hydraulic Cement, Oil Well Cement, White Cement, Portland Cement Type I, IA, II, IIA, III, IIIA, IV, IVA, V, VA, 10, 20, 30, 40, 50, OWH, OWG Cement, OW Class G HSR

Note: This MSDS covers many products. Individual composition of hazardous constituents will vary.

WHMIS Classification: D2A, R

Emergency Telephone Numbers

Health & Transportation: CHEMTREC 1-800-424-9300 or 703-527-3887

2. INFORMATION ON COMPONENTS

| Component Name | % | CAS No. |
|-------------------------------|-----------|------------|
| Tri-Calcium Silicate | 20 - 70 | 12168-85-3 |
| Di-Calcium Silicate | 10 - 60 | 10034-77-2 |
| Tetra-Calcium-Alumino-Ferrite | 5 - 15 | 12068-35-8 |
| Calcium Sulfate | 2 - 10 | Various |
| Tri-Calcium Aluminate | 1 - 15 | 12042-78-3 |
| Calcium Carbonate | 0 - 5 | 1317-65-3 |
| Magnesium Oxide | 0 - 4 | 1309-48-4 |
| Calcium Oxide | 0 - 0.2 | 1305-78-8 |
| Crystalline Silica | 0 - 0.2 | 14808-60-7 |
| Chromates | 0 - 0.005 | Various |

| Component Name | EXPOSURE LIMITS | |
|----------------|-----------------|-----------|
| | OSHA PEL | ACGIH TLV |
| | TWA | TWA |

| | | |
|-----------------------------------|--|------------------------------|
| Portland Cement (CAS 65997-15-1)* | | |
| (Respirable Dust) | 5 mg/m ³ | |
| (Total Dust) | 15 mg/m ³ | 10 mg/m ³ |
| Calcium Sulfate | | |
| (Respirable Dust) | 5 mg/m ³ | |
| (Total Dust) | 15 mg/m ³ | 10 mg/m ³ |
| Calcium Carbonate | | |
| (Respirable dust) | 5 mg/m ³ | |
| (Total Dust) | 15 mg/m ³ | 10 mg/m ³ |
| Magnesium Oxide | 15 mg/m ³ | 10 mg/m ³ |
| Calcium Oxide | 5 mg/m ³ | 2 mg/m ³ |
| Crystalline Silica Quartz | | 0.05 mg/m ³ |
| Quartz (Respirable) | 10 mg/m ³ / (%SiO ₂ / 2) | |
| Quartz (Total Dust) | 30 mg/m ³ / (%SiO ₂ / 2) | |
| Chromates | 0.1 mg(CrO ₃) / m ³ | 0.05 mg(Cr) / m ³ |
| Nuisance Dust | | |
| (Respirable) | 5 mg/m ³ | 3 mg/m ³ |
| (Total / Inhalable) | 15 mg/m ³ | 10 mg/m ³ |

*This value is for particulate matter containing no asbestos and < 1% crystalline silica.

3. HAZARD IDENTIFICATION

Emergency Overview

Solid; gray powder; odorless.

Potential Health Effects

INHALATION (acute): Breathing dust may cause nose, throat or lung irritation and choking. The described effect depends on the degree of exposure.

INHALATION (chronic): Prolonged or repeated exposure may cause lung injury including silicosis. This product may contain crystalline silica. Crystalline silica has been classified by IARC as a known human carcinogen. Some human studies indicate potential for lung cancer from crystalline silica exposure. Risk of injury depends on duration and level of exposure. Long term exposures which result in silicosis may result in additional health effects.

EYE CONTACT (acute/chronic): May cause eye irritation, severe burns and damage to cornea.

SKIN CONTACT (acute/chronic): May cause dry skin, redness, discomfort, irritation or severe burns. May produce allergic reaction potentially associated with hexavalent chromium. Thickening of the skin (scleroderma) may be associated with exposure to high levels of crystalline silica.

INGESTION (acute/chronic): Ingestion of large amounts may cause intestinal distress.

4. FIRST AID MEASURES

INHALATION: Move person to fresh air. Seek medical attention for discomfort.

EYE CONTACT: Rinse thoroughly with water. Seek medical attention for abrasions.

SKIN CONTACT: Wash with soap and water. Use moisturizing creams for irritated skin. Seek medical attention for burns.

INGESTION: Do not induce vomiting, but drink plenty of water. Seek medical attention for discomfort.

5. FIREFIGHTING MEASURES

Flashpoint and Method: None.

Flammable Limits: Not combustible.

Autoignition Temperature: None.

General Hazard: Avoid breathing dust.

Firefighting Instructions: Treat adjacent material.

Firefighting Equipment: This product is not a fire hazard. Self contained breathing apparatus is recommended to limit exposures to smoke from any combustion source.

Hazardous Combustion Products: None.



Material Safety Data Sheet , Portland Cement

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6. ACCIDENTAL RELEASE MEASURES

General: Wind blown dust may cause the hazards identified in Section 3.
Remove spilled material to limit potential harm.

Land Spill: Clean up spilled material.

Water Spill: Clean up spilled material.

7. HANDLING AND STORAGE

General: Avoid accidental release. Store dry and away from water.

Storage Temperature: Unlimited.

Storage Pressure: Unlimited.

Empty Containers: Dispose of containers in an approved landfill or incinerator.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Engineering Controls

Use exhaust ventilation to maintain dust levels below exposure limits in workplaces with poor ventilation and dusty conditions.

Personal Protection

RESPIRATORY PROTECTION: Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator when exposed to dust above exposure limits.

EYE PROTECTION: Wear glasses or safety goggles to prevent contact with eyes. Wearing contact lenses when using this product under dusty conditions is not recommended.

SKIN PROTECTION: Wear impervious gloves, shoes and protective clothing to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------|---------------------|
| Vapor Pressure: | Not measurable |
| Vapor Density: | Not measurable |
| Specific Gravity: | 3.2 |
| Solubility in Water: | Slight (0.1 - 1.0%) |
| Evaporation Rate: | Not measurable |
| pH (in water): | 12 - 13 |
| Boiling Point: | >1000° C |
| Freezing Point: | None, solid |
| Viscosity: | None, solid |

10. STABILITY AND REACTIVITY

General: Product is stable but must be kept dry. Reacts with water forming polymerized silicates and calcium oxide.

Incompatible Materials and Conditions to Avoid: Must be kept dry.

Dissolves in hydrofluoric acid producing corrosive silicon tetrafluoride gas.

Silicates react with powerful oxidizers such as fluorine, chlorine trifluoride and oxygen difluoride.

Hazardous Decomposition: None, powdered solid.

11. MSDS PREPARATION AND TOXICOLOGICAL INFORMATION

For detailed toxicological information contact:

Environment, Health & Safety and Public Affairs
Lafarge North America
12950 Worldgate Drive, Suite 500
Herndon, VA 20170
(703) 480-3600

12. ECOLOGICAL INFORMATION

For detailed ecological information: See Section 11 above.

13. DISPOSAL CONSIDERATIONS

Dispose in landfill in accordance with all applicable regulations. Any disposal practice must be in compliance with local, provincial, state and federal laws and regulations. Contact local environmental agency for specific rules.

14. REQUIRED TRANSPORT INFORMATION

Not a hazardous material for DOT or TDG shipping.

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

OSHA Hazard Communication Rule, 29 CFR 1910.1200:

This product is considered by OSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

CERCLA/SUPERFUND, 40 CFR 117.302: Not listed.

SARA TITLE III, Sections 311-312 Hazard Category:

This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous chemical and a delayed health hazard.

SARA Section 313 Information:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Toxic Substance Control Act (TSCA):

Some constituents identified in this product are listed on the TSCA Inventory.

California Proposition 65:

CRYSTALLINE SILICA (CAS - 14808-60-7) is considered to be a carcinogen by the state of California.

WHMIS Information

This product contains substances considered to be hazardous by Health Canada and is a controlled product. Consult local authorities for acceptable exposure limits. WHMIS <http://www.hc-sc.gc.ca/whmis>

16. OTHER INFORMATION

Abbreviations:

| | |
|-------------------|--|
| CAS No | Chemical Abstract Service number |
| OSHA | Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| ACGIH | American Conference of Governmental Industrial Hygienists |
| TLV | Threshold Limit Value |
| TWA | Time Weighted Average (8 hour) |
| CL | Ceiling Limit |
| mg/m ³ | milligrams per cubic meter |
| IARC | International Agency for Research on Cancer |
| NIOSH | National Institute for Occupational Safety and Health |
| pH | negative log of hydrogen ion |
| > | greater than |
| DOT | U.S. Department of Transportation |
| TDG | Transportation of Dangerous Goods |
| CFR | Code of Federal Regulations |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| SARA | Superfund Amendments and Reauthorization Act |
| WHMIS | Workplace Hazardous Materials Information System |

Information in this MSDS is believed to be current and accurate at the time provided. It is the user's obligation to determine the conditions of safe use of this product.

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT INFORMATION

Product Name: Propane
Trade Name: LPG (Liquified Petroleum Gas), LP-Gas
Chemical Formula: C₃H₈

WHMIS CLASSIFICATION

Class A - Compressed Gas
Class B, Division 1 - Flammable Gas

Supplier: Superior Propane Inc.
1111 - 49th Avenue N.E.
Calgary, AB T2E 8V2

Business: (403) 730-7500

Local Market

Emergency Number: _____
(Non Medical)

Application and Use: Propane is commonly used as a fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent and as a chemical feedstock.

SECTION 2 - HAZARDOUS INGREDIENTS

| COMPONENTS | CAS NO. | % Volume (v/v) | LD50 |
|----------------------------------|-----------|----------------|----------------|
| Propane | 74 -98-6 | 90% - 99% | Not Applicable |
| Propylene | 115 -07-1 | 0% - 5% | Not Applicable |
| Ethane | 74 -84-0 | 0% - 5% | Not Applicable |
| Butane and heavier hydro carbons | 106 -97-8 | 0% - 2.5% | Not Applicable |

Occupational Exposure Limit:

Based upon animal test data, the acute toxicity of this product is expected to be inhalation: 4 hour LC50 = 280,000 ppm (Rat).

Note: Composition is typical for HD-5 Propane per The Canadian General Standard Board CGSB 3.14 National Standard of Canada. Exact composition will vary from shipment to shipment.

SECTION 3 - CHEMICAL AND PHYSICAL DATA

Form: Liquid and vapour while stored under pressure.

Boiling Point: -42°C @ 1 atm.

Freezing Point: -188°C

Evaporation Rate: Rapid (Gas at normal ambient conditions).

Vapour Pressure: 1435 kPa (maximum) @ 37.8°C

Vapour Density: 1.52 (Air = 1)

Coefficient of Water/Oil Distribution: Not available.

pH: Not available.

Solubility in water: Slight, 6.1% by volume @ 17.8°C

Specific Gravity: 0.51 (water = 1)

Appearance/Odour: Colourless liquid and vapour while stored under pressure. Colourless and odourless gas in natural state at any concentration. Commercial propane has an odourant added, ethyl mercaptan, which has an odour similar to boiling cabbage.*

Odour Threshold: 4800 ppm

* With proper handling, transportation and storage, adding a chemical odourant such as eth-merc has proven to be a very effective warning device, but all odourants have certain limitations. The effectiveness of the odourant may be diminished by a person's sense of smell, by competing odours and by oxidation which may cause a potentially dangerous situation.

SECTION 4 - FIRE OR EXPLOSION HAZARD

Flash Point: -103.4°C

Method: Closed cup.

Flammable Limits: Lower 2.4%, Upper 9.5%

Auto Ignition Temperature: 432°C

Products Evolved Due To Heat Or Combustion: Carbon monoxide can be produced when primary air and secondary air are deficient while combustion is taking place.

Fire and Explosive Hazards: Explosive air-vapour mixtures may form if allowed to leak to atmosphere.

Sensitivity To Impact: No.

Sensitivity To Static Discharge: Yes.

Fire Extinguishing Precautions: Use water spray to cool exposed cylinders or tanks. Do not extinguish fire unless the source of the escaping gas that is fueling the fire can be turned off. Fire can be extinguished with carbon dioxide and/or dry chemical (BC). Container metal shells require cooling with water to prevent flame impingement and the weakening of metal. If sufficient water is not available to protect the container shell from weakening, the area will be required to be evacuated. If gas has not ignited, liquid or vapour may be dispersed by water spray or flooding.

Special Fire Fighting Equipment: Protective clothing, hose monitors, fog nozzles, self-contained breathing apparatus.

SECTION 5 - REACTIVITY DATA

Stability: Stable.

Conditions To Avoid: Keep separate from oxidizing agents. Gas explodes spontaneously when mixed with chloride dioxide.

Incompatibility: Remove sources of ignition and observe distance requirements for storage tanks from combustible material, drains and openings to building.

Hazardous Decomposition Products: Deficient primary and secondary air can produce carbon monoxide.

Hazardous Polymerization: Will not occur.

SECTION 6 – TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTES OF ENTRY:

Inhalation: Simple asphyxiant. No effect at concentrations of 10,000 ppm (peak exposures). Higher concentrations may cause central nervous system disorder and/or damage. Lack of oxygen may cause dizziness, loss of coordination, weakness, fatigue, euphoria, mental confusion, blurred vision, convulsions, breathing failure, coma and death. Breathing high vapour concentrations (saturated vapours) for a few minutes may be fatal. Saturated vapours may be encountered in confined spaces and/or under conditions of poor ventilation. Avoid breathing vapours or mist.

Skin and Eye Contact: Exposure to vapourizing liquid may cause frostbite (cold burns) and permanent eye damage.

Ingestion: Not considered to be a hazard.

Acute Exposure: The acute toxicity of this product is expected to be inhalation; 4 hour LC50=280,000ppm (Rat).

Chronic Exposure: There are no reported effects from long term low level exposure.

Sensitization to Product: Skin–unknown, Respiratory–unknown.

Occupational Exposure Limits: American Conference of Governmental Industrial Hygienists (ACGIH) lists as a simple asphyxiant. ACGIH TLV: 1000 ppm.

Carcinogenicity, Reproductive Toxicity, Teratogenicity, Mutagenicity: No effects reported.

SECTION 7 – PREVENTIVE MEASURES

Eyes: Safety glasses, are recommended when transferring product.

Skin: Insulated gloves required if contact with liquid or liquid cooled equipment is expected. Wear gloves and long sleeves when transferring product.

Inhalation: Where concentration in air would reduce the oxygen level below 18% air or exceed occupational exposure limits in section 6, self-contained breathing apparatus is required.

Ventilation: Explosion proof ventilation equipment required in confined spaces.

SECTION 8 – EMERGENCY AND FIRST AID PROCEDURES

FIRST AID:

Eyes: Should eye contact with liquid occur, flush eyes with lukewarm water for 15 minutes. Obtain immediate medical care.

Skin: In case of "Cold Burn" from contact with liquid, immediately place affected area in lukewarm water and keep at this temperature until circulation returns. If fingers or hands are frostbitten, have the victim hold his hand next to his body such as under the armpit. Obtain immediate medical care.

Ingestion: None considered necessary.

Inhalation: Remove person to fresh air. If breathing is difficult or has stopped, administer artificial respiration. Obtain immediate medical care.

SPILL OR LEAK:

Eliminate leak if possible.

Eliminate source of ignition.

Ensure cylinder is upright.

Disperse vapours with hose streams using fog nozzles. Monitor low areas as propane is heavier than air and can settle into low areas. Remain upwind of leak. Keep people away. Prevent vapour and/or liquid from entering into sewers, basements or confined areas.

SECTION 9 – TRANSPORTATION, HANDLING AND STORAGE

- Transport and store cylinders and tanks secured in an upright position in a ventilated space away from ignition sources (so the pressure relief valve is in contact with the vapour space of the cylinder or tank).
- Cylinders that are not in use must have the valves in the closed position and be equipped with a protective cap or guard.
- Do not store with oxidizing agents, oxygen, or chlorine cylinders.

- Empty cylinders and tanks may contain product residue. Do not pressurize, cut, heat or weld empty containers.
- Transport, handle and store according to applicable federal and provincial codes and regulations.

Transportation of Dangerous Goods (TDG)

- TDG Classification: Flammable Gas 2.1
- TDG Shipping Name: Liquified Petroleum Gas (Propane)
- TDG Special Provisions: 56, 90, 102
- PIN Number: UN1075

SECTION 10 – PREPARATION

Superior Propane Inc., Regulations & Safety Department. (403) 730-7500 Date prepared: November 2001.
Supersedes: September 1999.

The information contained herein is believed to be accurate. It is provided independently of any sale of the product. It is not intended to constitute performance information concerning the product. No express warranty, implied warranty of merchantability or fitness for a particular purpose is made with respect to the product information contained herein.

SECTION I-MATERIAL IDENTIFICATION AND USE

| | | | |
|---------------------------|----------------------------------|-------------------------|-------------------------|
| Material Name/Identifier: | Silicone Gasket Maker | Stock No. | 470/473/474 |
| Manufacturer's Name: | Kleen-Flo Tumbler Industries Ltd | Street Address: | 75 Advance Blvd. |
| City: | Brampton | Province: | Ontario |
| Postal Code: | L6T 4N1 | Emergency Phone #: | (905) 793-4311 |
| Chemical Name: | N. Ap (mixture) | Chemical Family: | Silicone rubber sealant |
| Chemical Formula: | N. Ap (mixture) | Trade Names & Synonyms: | NO |
| Material Use: | Sealer | Molecular Weight: | N/Ap. |

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

| Hazardous Ingredients | C.A.S. | Approximate Concentration | LD50 Species & Route | LC50 Species & Route |
|--|------------|---------------------------|----------------------|--------------------------|
| Methyltriacetoxysilane | 4253-34-3 | 1 - 5% | 2060 mg/kg rat-oral | N/A |
| Polydimethylsiloxane | 70131-67-8 | 60 - 80% | 40000 mg/kg rat-oral | >535 mg/L (4hr) rat-inh. |
| Colour pigment | N/A | 1 - 5% | N/A | N/A |
| Amorphous Silica | 68583-49-3 | 10 - 30% | N/A | N/A |
| Siloxanes and Silicone di-Me polymers | 68554-67-6 | 10% | >40 g/kg rat-oral | >535 mg/L rat-inh. |

SECTION III-PHYSICAL DATA FOR MATERIAL

| | | | |
|------------------------|-------|-------------------------------------|------------------------------|
| Physical State: | solid | Odour/Appearance: | Acetic odour/ rubbery solid. |
| Specific Gravity: | 1.07 | Odour Threshold(p.p.m.): | N/A |
| Boiling Point: | N/A | Evaporation Rate: | <1 |
| Freezing Point: | N/A | Solubility in Water: | insoluble |
| % Volatile(by volume): | < 3.9 | Vapour Pressure(mm)Hg: | N/A |
| Vapour Density(Air=1): | N/A | Coefficient of Water/Oil Distribut: | N/A |
| pH | N/Ap. | | |

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

| | | | |
|----------------------------|------------------------------------|---|-------|
| Flammability Yes/No | No | If yes under which conditions?: | N.Ap. |
| Auto Ignition Temperature: | N/A | Means of Extinction: Dry chemical, foam, waterspray, carbon dioxide | |
| Flashpoint and Method: | none | Hazardous Combustion Products: silicon dioxide, acetic acid | |
| | | carbon dioxide, carbon monoxide, formaldehyde | |
| Upper Flammable limit | | Lower Flammable Limit(% by volume): | N/A |
| (% by volume): | N/A | | |
| Explosion Data: | Sensitivity to Mech. Impact: N. Ap | Sensitivity to Static Discharge: | N.Ap. |

SECTION V-REACTIVITY DATA

| | | | |
|---|---|-------------------------------|-------|
| Chemical Stability Yes/No: | Yes | If NO under which conditions? | N.Ap. |
| Incompatibility to Other Substances Yes/No: | None known | If so which ones? | N.Ap. |
| Reactivity and under what conditions? | Heat, open flames, fire. | | |
| Hazardous Decomposition Products: | Carbon oxides and traces of incompletely burned carbon compounds. | | |
| | silicone dioxide. | | |
| N/E: not established | N.Ap.: not applicable | N/A: not available | |

SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT

| | | | |
|--|---|--|------------|
| Route of Entry: ALL Routes | --SKIN CONTACT --SKIN ABSORPTION --EYE CONTACT --INHALATION --INGESTION | | |
| Effects of Acute Exposure: | Uncured product contact will irritate skin, lips, gums and tongue. May cause mild respiratory irritation. | | |
| Effects of Chronic Exposure: | No known chronic health effects, but should avoid unnecessary exposure to chemical product | | |
| | The product contains methylpolysiloxane which can generate formaldehyde at 150oC. | | |
| | Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant and potential cancer hazard. | | |
| LD 50 of Product: | N/A | LC 50 of Product: | N/A |
| Irritancy of Product: | Skin irritant | Exposure Limits of Product: | N/A |
| Sensitization of Product: | N/A | Toxicologically Synergistic Materials: | N/A |
| --CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY | | | None known |

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

| | | | |
|------------------------------------|---|---------------|----------------|
| Gloves(specify): | Plastic or rubber | Eye(specify): | Safety glasses |
| Respiratory(specify): | Mask with filter for free acidic vapour | Clothing: | Not required |
| Respiratory Protection: | If used indoors or on a continuous basis, use of cartridge type respirator is recommended | | |
| Engineering Controls: | Local and mechanical ventilation. | | |
| Leak and Spill Procedure: | Wipe, scrape or soak up in an inert material and put in a container for disposal | | |
| Waste Disposal: | Standard methods approved in your region. | | |
| Storage Requirements: | Store at room temperature and in well ventilated area. Keep lid closed when not in use. | | |
| Handling Procedures and Equipment: | Acetic acid is released during application and curing. Provide adequate ventilation to control exposures within guidelines of OSHA. | | |
| TDG Classification: | Consumer Commodity | | |
| WHMIS Classification: | Consumer Commodity | | |

SECTION VIII-FIRST AID MEASURES

| | |
|-------------|---|
| Eye: | Rinse thoroughly with water for 10-15 minutes. Consult a physician immediately. |
| Skin: | Rinse with water for 5-10 minutes and apply hand cream. |
| Inhalation: | Move patient to fresh air and restore breathing if required. |
| Ingestion: | May be harmful if swallowed. |

SECTION IX-PREPARATION DATE OF M.S.D.S.

| | | |
|---------------------------|----------------|---|
| Additional Info/Comments: | | Sources Used: |
| Phone Number: | (905) 793-4311 | Prepared By: Quality Control Laboratory |
| Date: | March 3, 2003 | Kleen-Flo Tumbler Industries Limited |

THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED

N/A: not available

N/E: not established

SECTION I-MATERIAL IDENTIFICATION AND USE

| | | | |
|---------------------------|----------------------------------|-------------------------|-------------------------|
| Material Name/Identifier: | Silicone Gasket Maker | Stock No. | 470/473/474 |
| Manufacturer's Name: | Kleen-Flo Tumbler Industries Ltd | Street Address: | 75 Advance Blvd. |
| City: | Brampton | Province: | Ontario |
| Postal Code: | L6T 4N1 | Emergency Phone #: | (905) 793-4311 |
| Chemical Name: | N. Ap (mixture) | Chemical Family: | Silicone rubber sealant |
| Chemical Formula: | N. Ap (mixture) | Trade Names & Synonyms: | NO |
| Material Use: | Sealer | Molecular Weight: | N/Ap. |

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|--|------------|---------------------------|----------------------|--------------------------|
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| Polydimethylsiloxane | 70131-67-8 | 60 - 80% | 40000 mg/kg rat-oral | >535 mg/L (4hr) rat-inh. |
| Colour pigment | N/A | 1 - 5% | N/A | N/A |
| Amorphous Silica | 68583-49-3 | 10 - 30% | N/A | N/A |
| Siloxanes and Silicone di-Me polymers | 68554-67-6 | 10% | >40 g/kg rat-oral | >535 mg/L rat-inh. |

SECTION III-PHYSICAL DATA FOR MATERIAL

| | | | |
|------------------------|-------|-------------------------------------|------------------------------|
| Physical State: | solid | Odour/Appearance: | Acetic odour/ rubbery solid. |
| Specific Gravity: | 1.07 | Odour Threshold(p.p.m.): | N/A |
| Boiling Point: | N/A | Evaporation Rate: | <1 |
| Freezing Point: | N/A | Solubility in Water: | insoluble |
| % Volatile(by volume): | < 3.9 | Vapour Pressure(mm)Hg: | N/A |
| Vapour Density(Air=1): | N/A | Coefficient of Water/Oil Distribut: | N/A |
| pH | N/Ap. | | |

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

| | | | |
|---|------------------------------------|-------------------------------------|--|
| Flammability Yes/No | No | If yes under which conditions?: | N.Ap. |
| Auto Ignition Temperature: | N/A | Means of Extinction: | Dry chemical, foam, waterspray, carbon dioxide |
| Flashpoint and Method: | none | Hazardous Combustion Products: | silicon dioxide,acetic acid carbon dioxide, carbon monoxide, formaldehyde |
| Upper Flammable limit (% by volume): | N/A | Lower Flammable Limit(% by volume): | N/A |
| Explosion Data: | Sensitivity to Mech. Impact: N. Ap | Sensitivity to Static Discharge: | N.Ap. |

SECTION V-REACTIVITY DATA

| | | | |
|---|--|-------------------------------|-------|
| Chemical Stability Yes/No: | Yes | If NO under which conditions? | N.Ap. |
| Incompatibility to Other Substances Yes/No: | None known | If so which ones? | N.Ap. |
| Reactivity and under what conditions? | Heat, open flames, fire. | | |
| Hazardous Decomposition Products: | Carbon oxides and traces of incompletely burned carbon compounds. silicone dioxide. | | |
| N/E: not established | N.Ap.: not applicable | N/A: not available | |



MATERIAL SAFETY DATA SHEET

Date Prepared: October 25, 2003
Supersedes: January 24, 2003
MSDS Number: 08085

1. PRODUCT INFORMATION

Product Identifier: ESSO SNOWMOBILE OIL

Application and Use:
Mineral oil for gasoline two-stroke engines

Product Description:

A mixture of refined petroleum lubricant basestocks and petroleum solvent plus additives

REGULATORY CLASSIFICATION

WHMIS:
Class B, Division 3: Combustible Liquids.

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT
All components of this product are either on the Domestic Substances List (DSL) or are exempt.

TDG INFORMATION (RAIL/ROAD):
Not Regulated in Canada.

Please be aware that other regulations may apply.

TELEPHONE NUMBERS

Emergency 24 hr. (519) 339-2145
Technical Info. (800) 268-3183

MANUFACTURER/SUPPLIER:

IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(416) 968-4441

2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a) (i) to (iv) or paragraph 14(a) of the Hazardous Products Act:

| NAME | % | CAS # |
|-------------------------------|-----------|--|
| Light hydrotreated distillate | 10-30 V/V | 64742-47-8 LD50:>5g/Kg, orl, rat LD50:>3 g/Kg, skn, rbt |

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
 Specific gravity: not available
 Viscosity: 6.80 cSt at 100 deg C
 Vapour Density: not available
 Boiling Point: 150 to 615 deg C
 Evaporation rate: <1 (1= n-butylacetate)
 Solubility in water: negligible
 Freezing/Pour Point: -39 deg C ASTM D97
 Odour Threshold: not available
 Vapour Pressure: 4.2 kPa at 20 deg C
 Density: 0.85 g/cc at 15 deg C
 Appearance/odour: Blue-green oil , petroleum odour.

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

Negligible hazard at normal temperatures (up to 38 deg C).
 Elevated temperatures or mechanical action may form vapours, mists or fumes which may be irritating to the eyes, nose, throat and lungs.
 High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.
 Avoid breathing vapours or mists.

EYE CONTACT:

Slightly irritating, but will not injure eye tissue.

SKIN CONTACT:

Low toxicity.
 Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

INGESTION:

Low toxicity.