



MATERIAL SAFETY DATA SHEET

SURFTREAT 13574 (DOWTHERM IG HEAT TRANSFER FLUID 50%)

Substance key: 000000563794

Revision Date: 11/28/2014

Version : 1 - 1 / CDN

Date of printing :11/30/2014

WHMIS controlled: yes
Class: D1B
D2A

Section 01 - Product and company identification

Identification of the company: Clariant (Canada) Inc.
2 Lone Oak Court
Toronto, Ontario M9C 5R9,

Information of the substance/preparation:

ESHA
Phone (514) 832 2559, Fax (704) 330 1505
Canada.PS@Clariant.com

Emergency tel. number: +1 800-424-9300 CHEMTREC, +1 (703) 527-3887 INTERNATIONAL

Trade name: SURFTREAT 13574

Material number: 281362

Primary product use: Petroleum industry, additive for crude oil

Section 02 - Hazards identification

Health effects of exposure:

Harmful by ingestion. Contact with eyes may cause serious eye damage. Skin contact will cause irritation. Inhalation may cause irritation of the respiratory tract.

Ethylene glycol : human poison by ingestion. Very toxic by inhalation. A skin, eye and mucous membrane irritant. Human systemic effect by ingestion and inhalation (eye lacrimation, general anesthesia, head- ache, cough, respiratory stimulation, nausea or vomiting, pulmonary, kidney and liver changes). There is evidence of experimental terato- genic and mutagenic data. Repeated or high exposure may cause kidney and brain damage.

Section 03 - Composition/information on ingredients

Hazardous ingredients:

| Component | CAS number | Concentration |
|------------------------------------|------------|---------------|
| Ethylene glycol | 107-21-1 | 30 - 60 % |
| Dipotassium hydrogenorthophosphate | 7758-11-4 | 1 - 5 % |

Component toxicity information:

Ethylene glycol (107-21-1)

Acute oral toxicity: LD50 4,700 mg/kg (Rat)

Section 04 - First aid measures

After inhalation:

Move the victim to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical advice/ attention.

After contact with skin:

Remove contaminated clothing and wash affected areas with soap and plenty of water for at least 15 minutes. If redness or skin irritation occurs, seek medical attention.

After contact with eyes:

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

After ingestion:

Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water immediately to reduce concentration. Seek medical attention immediately. If ingested, immediately seek medical attention and bring along a copy of the msds.

Advice to doctor / Treatment:

The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. Ethanol is antidotal, and its early administration may block the formation of Nephrotoxic Metabolites of ethylene glycol in the liver. Ethanol should be given intravenously, as a 5% solution in Sodium Bicarbonate, at a rate of about 10 ml ethanol per hour. A desired therapeutic level of Ethanol in blood is 100 mg/dl. Hemodialysis may be required. Pulmonary Edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. the mechanism of production has not been elucidated, but it appears to be noncardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end-expiratory pressure may be required.

Section 05 - Fire fighting measures

| | |
|-------------------------------|---|
| Flashpoint: | 126.7 °C Method: Pensky-Martens (DIN EN ISO 2719) (closed cup) |
| Lower explosion limit: | 3.2 %(V) |
| Upper explosion limit: | no data available |

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special fire fighting procedure:

Wear full protective clothing and self-contained breathing apparatus. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being build up due to heat. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Hazardous combustion products: Hazardous decomposition products: Carbon monoxide and carbon dioxide. Keep away from sources of ignition. Take precautionary measures to prevent static discharges. Wear proper protective equipment to avoid inhalation of smoke, fumes, or hazardous decomposition of products.

Section 06 - Accidental release measures**Steps to be taken in case of spill or leak:**

Only trained personnel should be involved in spill operations. Wear suitable protective equipment. Ensure adequate ventilation. Remove all ignition sources. Contain spill and pump into proper containers using explosion-proof equipment. Smaller spills may be recovered using an inert non-combustible absorbent material (sand, kieselguhr) and collected into suitable containers. Do not use organic absorbent material. Containers in which spilt substance has been collected must be properly labelled. Spill may be covered with an appropriate foam to hinder the formation of explosive vapours. Wash spill area. Do not allow to enter sewers, storm drains, surface waters or the soil.

Section 07 - Handling and storage**Advice on safe handling:**

Avoid contact with skin, eyes and clothing. Use only with adequate ventilation and proper protective eyewear, gloves, and clothing.

Further info on storage conditions:

Store in original container. Keep container tightly closed; open and handle with care

Section 08 - Exposure controls / personal protection**Occupational exposure limits:**

| Component | CAS number: | Regulatory list | Type of value | Value 1 | Value |
|----------------------------|-------------|---|---------------|---------|---------|
| Ethylene glycol (Aerosol) | 107-21-1 | USA. ACGIH Threshold Limit Values (TLV) | Ceiling limit | | 100 mg/ |
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Respiratory protection:

Wear an approved respirator when exposed to vapours or to mists beyond the TLV. Use appropriate filters. Do not exceed filters limitations. TLV = Threshold Limit Value

| | |
|------------------------------------|--|
| Hand protection: | Chemical resistant gloves |
| Eye protection: | Safety goggles |
| Other protective equipment: | Avoid skin contact. Wear suitable protective equipment. |

Section 09 - Physical and chemical properties

| | |
|-----------------------------|---------------------|
| Form: | liquid |
| Color: | Colorless to yellow |
| Odor: | characteristic |
| pH: | 9.5 |
| Solubility in water: | soluble |

Density: 1.06 - 1.10 g/cm³
Freezing point : -37 °C
Boiling point/boiling range : 108 °C

Section 10 - Stability and reactivity

Thermal decomposition: No decomposition if used as directed.
Chemical stability: Stable
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products Carbon monoxide and carbon dioxide

Section 11 - Toxicological information

Acute oral toxicity: LD50 8,200 mg/kg (Rat)
Acute inhalation toxicity: LC50 > 3.95 mg/l (7 h, Rat)
Acute dermal toxicity: LD50 > 2,000 mg/kg (Rabbit)
Acute dermal toxicity: LD50 > 2,000 mg/kg (Rabbit)
Skin irritation: irritating
The data refer to the solvent
Eye irritation: irritating
The data refer to the solvent

Section 12 - Ecological information

Product information:

Remarks:

Product must not be released into water without pre-treatment.

Section 13 - Disposal considerations

Waste disposal information:

Preferred disposal is through industrial waste treatment systems. Product may be landfilled after solidification. Follow local regulations.

Section 14 - Transport information

TDG not restricted
IATA not restricted
IMDG not restricted

Section 15 - Regulatory information

Registration status

DSL: yes
NDSL: no

All components of the product are listed on the DSL/Canada.

CEPA

Listed as toxic substance: Not listed
Listed as priority substance: Not listed

NPRI Listed

Section 16 - Other information

WHMIS



May cause eye, skin, and respiratory tract irritation. Harmful if swallowed or if inhaled

The information contained on this MSDS is to the best of our knowledge an accurate summary of the data available as of the date of preparation. Clariant (Canada) Inc. is not liable for the application or use of this information in situations beyond its control or outside the normal and expected use of its product. Clariant (Canada) Inc. assumes no responsibility for damage or injury from the use of the product described herein.