

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: DE-ICING FLUID 100 **Date of Revision:** January 18, 2017
Product Code: D347
Other Name(s): MIKE'S DE-ICING FLUID
Distributed By: MIKE'S OILFIELD SERVICES LTD.
Recommended Use and Restrictions on Use: de-icing fluid
Manufactured By: Ostrem Chemical Co. Ltd. **Phone:** 780-440-1911
2310 - 80th Avenue NW **In Case of Emergency Only, Phone**
Edmonton, Alberta, Canada T6P 1N2 **CANUTEC:** 613-996-6666
www.ostrem.com

2. HAZARDS IDENTIFICATION

Classification of the Mixture: Flammable Liquids - Category 1
Eye Damage/Irritation - Category 2A
Acute Toxicity, Oral - Category 3
Acute Toxicity, Dermal - Category 3
Acute Toxicity, Inhalation - Category 3
Specific Target Organ Toxicity (Single Exposure) - Category 1
Specific Target Organ Toxicity (Repeated Exposure) - Category 2

Label Elements:

Hazard Pictogram(s):



Signal Word: DANGER

Hazard Statement(s): Extremely flammable liquid and vapour.
Causes serious eye irritation.
Toxic if swallowed.
Toxic if in contact with skin.
Toxic if inhaled.
Causes damage to organs (eyes and central nervous system).
May cause damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention: Use only outdoors or in a well-ventilated area.
Do not breathe fumes or vapours.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof equipment.
Take action to prevent static discharges.
Wear protective gloves, protective clothing, and eye/face protection.

Safety Data Sheet

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|-----------|--|
| Response: | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice. IF SWALLOWED: Call a poison centre or physician. Rinse mouth. IF ON SKIN: Wash with plenty of water. Call a poison centre or physician if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison centre or physician. If exposed or concerned: Call a poison centre or physician. Get medical advice/attention if you feel unwell. |
| Storage: | Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. |
| Disposal: | Dispose of contents/container in accordance with local/regional/national/international regulations. |

Physical/health hazards not otherwise classified:

There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 milliliters (1/2 cup).

3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Chemical Name</u> | <u>Conc.</u> | <u>CAS #</u> | <u>Common Names</u> |
|----------------------|--------------|--------------|---------------------|
| ethylene glycol | 10.0% | 107-21-1 | |
| isopropanol (99%) | 35.0% | 67-63-0 | isopropyl alcohol |
| methanol | 51.0% | 67-56-1 | methyl alcohol |
| ethyl ether | 4.0% | 60-29-7 | ether |

4. FIRST-AID MEASURES

Necessary Measures:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice.
IF SWALLOWED: Call a poison centre or physician.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
Call a poison centre or physician if you feel unwell.
Take off immediately all contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison centre or physician.
If exposed or concerned: Call a poison centre or physician.
Get medical advice/attention if you feel unwell.

Most important symptoms, both acute and delayed:

Causes serious eye irritation.
Toxic if swallowed.
Toxic if in contact with skin.
Toxic if inhaled.
Causes damage to organs (eyes and central nervous system).
May cause damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary:

not applicable

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use extinguishing media appropriate for surrounding fire.

Safety Data Sheet

Specific hazards arising from the chemical (e.g.: hazardous combustion products):

May liberate carbon monoxide, carbon dioxide and formaldehyde.

Special protective equipment and precautions for firefighters:

As for surrounding fire. Firefighters should wear full protective clothing and self contained breathing equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear appropriate protective equipment. See section 8.

Environmental precautions:

Prevent from entering sewers, waterways or low areas.

Methods and materials for containment and cleaning up:

Isolate hazard area and restrict access. Small spills: soak up with inert absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling:

Use only outdoors or in a well-ventilated area.

Do not breathe fumes or vapours.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof equipment.

Take action to prevent static discharges.

Do not ingest. Avoid contact with eyes, skin and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

Store locked up.

Keep out of reach of children. Store in a cool, dry area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters - Exposure limits:

| <u>Ingredient:</u> | <u>Limit:</u> |
|--------------------|--|
| ethylene glycol | TWA: 100 mg/m ³ ACGIH (TLV) CEIL: 125 mg/m ³ OSHA (PEL) |
| isopropanol (99%) | CEIL: 50 ppm OSHA (PEL) ACGIH TWA: 200 ppm STEL 400 ppm |
| methanol | ACGIH TWA: 200 ppm STEL: 250 ppm |
| ethyl ether | OHS AB TWA: 400 ppm; STEL: 500 ppm ACGIH TWA: 400 ppm, STEL: 500 ppm |

Appropriate engineering controls:

Provide exhaust ventilation to keep airborne levels below recommended exposure limits.

Respiratory protection:

If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator.

Other protection:

Wear protective gloves, protective clothing, and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour etc.): clear, colourless liquid

Safety Data Sheet

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| Odour: | alcohol odour |
| Odour threshold: | not available |
| pH: | 7.7 |
| Melting/Freezing point: | not available |
| Initial boiling point and range: | not available |
| Flash point: | -5 C |
| Evaporation rate: | not available |
| Flammability (solid, gas): | not available |
| Upper/lower flammability or explosive limits: | not available |
| Vapour pressure: | not available |
| Vapour density: | not available |
| Relative density (specific gravity): | 0.811 |
| Solubility(ies): | complete |
| Partition co-efficient: n-octanol/water: | not available |
| Auto-ignition temperature: | not available |
| Decomposition temperature: | not available |
| Viscosity: | not available |

10. STABILITY AND REACTIVITY

Reactivity:

This material is considered to be non-reactive under normal use conditions.

Chemical stability:

Stable.

Possibility of hazardous reactions:

not available

Conditions to avoid (e.g.: static discharge, shock or vibration):

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take action to prevent static discharges.

Incompatible materials:

Oxidizers / Acid / Base

Hazardous decomposition products:

not available

11. TOXICOLOGICAL INFORMATION

POTENTIAL ACUTE HEALTH EFFECTS

| | |
|-------------------------|--------------------------------|
| Inhalation: | Toxic if inhaled. |
| Ingestion: | Toxic if swallowed. |
| Eye contact: | Causes serious eye irritation. |
| Skin contact: | Toxic if in contact with skin. |
| Skin absorption: | not available |

POTENTIAL CHRONIC HEALTH EFFECTS

| | |
|-------------------------|---------------|
| Inhalation: | not available |
| Ingestion: | not available |
| Eye contact: | not available |
| Skin contact: | not available |
| Skin absorption: | not available |

Mutagenicity:

not available

Carcinogenicity:

This information, if applicable, can be found in Section 2.

Reproductive toxicity:

This information, if applicable, can be found in Section 2.

Sensitization of product:

This information, if applicable, can be found in Section 2.

Specific Target Organ Toxicity - single exposure:

This information, if applicable, can be found in Section 2.

Specific Target Organ Toxicity - repeated exposure:

This information, if applicable, can be found in Section 2.

Toxicological Data:

Safety Data Sheet

Ingredient:

ethylene glycol
isopropanol (99%)
methanol

ethyl ether

Data:

Oral LD50: 4700 mg/kg (rat)
not available
Oral LD50: 100 mg/kg (rat)
Inhalation LC50: 5 mg/L (rat)
Dermal LD50: 300 mg/kg (rabbit)
Oral LD50: 1215 mg/kg (rat)
Inhalation LC50: 32000 ppm 4 h (rat)

Other Toxicological Information on Ingredients:

ethylene glycol

There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 milliliters (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.

The substance may be toxic to kidneys, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

12. ECOLOGICAL INFORMATION

| | |
|--|---------------|
| Ecotoxicity (aquatic and terrestrial, where available): | not available |
| Persistence and degradability: | not available |
| Bioaccumulative potential: | not available |
| Mobility in soil: | not available |
| Other adverse effects: | not available |
| Ecological Information on Ingredients: | not available |

13. DISPOSAL CONSIDERATIONS

Waste disposal: Disposal of all waste must be done according to local, provincial and federal regulations.

14. TRANSPORT INFORMATION

TDG classification: UN 1992; FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, ISOPROPANOL, ETHYL ETHER); CLASS 3 (6.1); PG II

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

16. PREPARATION INFORMATION

Prepared by: Technical Services Department, Ostrem Chemical Co. Ltd., Ph.: 780-440-1911
Date of Preparation: January 18, 2017
Date of Revision: January 18, 2017

This Safety Data Sheet may not be changed or altered in any way without the express knowledge and permission of Ostrem Chemical Co. Ltd.

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