MATERIAL SAFETY DATA SHEET
RAIN-X® DE-ICER WINDSHIELD WASHER FLUID

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: RAIN-X® DE-ICER WINDSHIELD WASHER FLUID
Product Use: Windshield washer
Synonyms: RX68102, RX68106, RX68116, RX68904

Company Information
SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427
USA

2. COMPONENT INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Weight Percent Range</th>
<th>Hazardous in Blend</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>50 - 90</td>
<td>No</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>20 - 40</td>
<td>Yes</td>
</tr>
<tr>
<td>BITREX</td>
<td>3734-33-6</td>
<td>&lt; 1</td>
<td>No</td>
</tr>
</tbody>
</table>

This product meets the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Hazards:
Flammable/Combustible X Acute Toxin X Chronic Toxin X Carcinogen --
Pressure -- Reactive -- Exposure Limit X Target Organ -- Other --

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview
DANGER: (Skull & Crossbone symbol) POISON. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. VAPOR HARMFUL. FLAMMABLE.

NFPA Ratings: Health 1 Flammability 2 Reactivity 0
Primary Route of Exposure: Skin X Inhalation -- Eye --

Health Effect Information
Eye Contact: Avoid eye contact. May be irritating to the eyes upon direct contact.

Skin Contact: Avoid skin contact. Single, short exposures, as expected with consumer use of this product, are expected to be practically non-irritating to the skin. Prolonged or repeated skin contact may result in dryness, chapping, and reddening. May be absorbed through skin.
**Inhalation:** Avoid inhalation of mists or vapors. Acute and chronic overexposures may be irritating to the respiratory tract. Inhalation of high concentrations of this product can cause central nervous system depression and narcosis. When high concentrations are inhaled, human signs may include a reddening of the face and a feeling of increased body heat, in addition, disturbed vision, dizziness, tremors, salivation, cardiac stress, drowsiness, dullness, numbness, weakness, headache, nausea, and confusion, as well as respiratory difficulties may be apparent. Intentional misuse by deliberately concentrating and inhaling this product can be harmful or fatal.

**Ingestion:** Do not ingest. Harmful or fatal if swallowed. Can cause reversible or permanent blindness. Visual symptoms include eye pain, blurred vision and constriction of visual fields. Can cause central nervous system (CNS) depression if ingested. Severe oral intoxication will lead to intense burning of the throat and may result in drowsiness, dullness, numbness, and headache followed by dizziness, weakness, and nausea. Loss of consciousness and convulsions followed by death may result. Initial symptoms are often followed by a period with few symptoms. After a latent period, symptoms usually recur with greater severity and visual disturbances, shortness of breath, abdominal pain and diarrhea. Ingestion of large quantities can lead to a metabolic acidosis, which can be fatal if untreated. Ingestion may result in lung aspiration. Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time of aspiration.

**Medical Conditions Aggravated by Exposure:** Drying and chapping may make the skin more susceptible to other irritants, sensitizers and disease.

**Other:** No information available.

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**4. FIRST AID INFORMATION**

**Eye Contact:** Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If irritation persists, seek medical attention.

**Skin Contact:** Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention.

**Inhalation:** If victim exhibits signs of vapor intoxication remove to fresh air. If discomfort persists seek medical attention. If breathing has stopped or is irregular, administer artificial respiration and supply oxygen if it is available. If victim is unconscious, remove to fresh air and seek immediate medical attention.

**Ingestion:** If large quantity is ingested and if person is conscious, give large quantities of water immediately. Seek immediate medical attention. If vomiting occurs lower head below knees to avoid aspiration.

**Notes to Physician:** Immediate medical treatment is imperative, especially if a large dose has been ingested. Administer alkali to correct acidosis. Hemodialysis is effective in the management of poisoning. Intravenous administration of ethanol has been effective.

**Other:** No information available.
5. FIRE AND EXPLOSION INFORMATION

Flammable Properties
- **Flash Point:** 73.4 F, 23 C
- **Flammable Limits in Air**
  - **Upper Percent:** No data available
  - **Lower Percent:** No data available
- **Autoignition Temperature:** No data available

**Test Method:** ASTM D 3828-81-Setaflash

**NFPA Classification:** Class IC - flammable liquid

**Extinguishing Media:** Use water spray (fog), dry chemical, foam, or carbon dioxide.

**Fire Fighting Measures**
- **Special Fire Fighting Procedures and Equipment:** Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture.
- **Unusual Fire and Explosion Conditions:** Dense smoke may be generated while burning. Carbon monoxide, and other oxides may be generated as products of combustion.
- **Hazardous Combustion By-Products:** None

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

**Personnel Safeguards:** Remove all sources of ignition. Provide adequate ventilation during clean-up. Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10.

**Regulatory Notifications:** Notify appropriate authorities of spill.

**Containment and Clean up:** Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

**Handling:** Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--Flammable and Combustible Liquids.

**Storage:** Do not transfer to unmarked containers. Store in a cool, well ventilated area in closed containers away from heat, sparks, open flame or oxidizing materials.

**Empty Container Warnings**
- **Drums:** Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed. Empty containers retain product residue and can be dangerous. DO NOT PRESSURIZE, CUT WELD, BRAZE SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
- **Plastic:** Do not reuse this container. Empty container may retain product residues.
Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>OSHA - PEL: TWA 200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH - TLV: TWA 200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH - TLV: STEL 250 ppm</td>
</tr>
</tbody>
</table>

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin Protection: No skin protection is required for single, short duration exposures. Launder soiled clothes.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If excessive levels of mists or vapors are generated while using this product, use an organic vapor respirator. All respirators must be NIOSH certified. See Section 3, Health Effect Information, Inhalation.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Engineering Controls / Work Practices

Ventilation: If product is used in enclosed or confined spaces, adequate ventilation must be provided to prevent buildup of vapors or mists. Adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits. See also Fire and Explosion Information in Section 5.

Other: No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Orange</td>
</tr>
<tr>
<td>Odor:</td>
<td>Alcohol</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density (air=1):</td>
<td>No data available</td>
</tr>
<tr>
<td>Percent Volatile by Volume:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>154.4 F, 68 C</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.95</td>
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<tr>
<td>Pour Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>No information available</td>
</tr>
<tr>
<td>Octanol / Water Coefficient:</td>
<td>Log Kiow = No data available</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>No data available</td>
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<tr>
<td>Average Carbon Number:</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity @ 100 F:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity @ 40 C:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: Keep away from heat, sparks, open flames and other ignition sources.
Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: Moderate irritation in Draize test in rabbits (methanol).

Primary Skin Irritation: Moderate irritation in Draize test in rabbits (methanol).

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: LC50 (rat) = 64,000 ppm (4 hours) (methanol)

Inhalation Sensitization: No information available

Oral Toxicity: LD50 (rat) = 5628 mg/kg (methanol)

Mutagenicity: No information available

Carcinogenicity: Methanol is not considered to be carcinogenic by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or OSHA.

Reproductive and Developmental Toxicity: No information available

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: 

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No information available

Terrestrial Toxicity: No information available

Chemical Fate and Transport: No information available

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: Dispose of residual products and empty containers responsibly.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available.
14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)
Highway / Rail (Bulk): NOT APPLICABLE
Highway / Rail (Non-Bulk): CONSUMER COMMODITY, ORM-D

For US shipments, US DOT law requires the shipper to determine the proper shipping description of the material that is being shipped. The shipping information and description contained in this section may not be suitable for all shipments of this material, but may help the shipper determine the proper shipping description for a particular shipment.

International Information

Vessel: IMDG Regulated: X  IMDG Not Regulated: --
Air: ICAO Regulated: X  ICAO Not Regulated: --

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.


Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification


Inventories: 80 - Canada - Domestic substances, 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA, 85 - China Inventory

Regulatory Search Results:
BITREX: 80, 81, 82, 83, 84, 85
METHYL ALCOHOL: 15, 16, 17, 20, 22, 23, 30, 33, 35, 42, 47, 48, 50, 61, 63, 65, 66, 67, 68, 69, 80, 81, 82, 83, 84, 85
WATER: 80, 81, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313: Consumer products are not regulated under SARA, Title III, Section 313.
IARC: No information available

SARA 311 / 312 Categories
Acute: X Chronic: X Fire: X Pressure: -- Reactive: --
Not Regulated: --

Canadian WHMIS Classification
Class B - Flammable and Combustible Material, Division 2, Flammable Liquids
Class D - Poisonous and infectious material, Division 2B, Toxic Material
Class D - Poisonous and infectious material, Division 1B, Toxic Material

European Union Classification
Hazard Symbols:
  Toxic / T / skull and crossbones in square.
  Highly flammable / F / flame in square.
Risk Phrases:
  R10: Flammable.
  R23/24/25: Toxic by inhalation, in contact with the skin and if swallowed.
  R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Phrases:
  S1/2: Keep locked up and out of the reach of children
  S7: Keep container tightly closed.
  S16: Keep away from sources of ignition - No smoking.
  S45: In case of accident or if you feel unwell seek medical advice immediately ...(show the label where possible).

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language
Front Label:
DANGER: (Skull & Crossbone symbol) POISON. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. FLAMMABLE. VAPOR HARMFUL.
Read carefully other cautions on back.

Back Label:
DANGER:
CONTAINS METHYL ALCOHOL. CANNOT BE MADE NON-POISONOUS.
PRECAUTIONARY MEASURES: Do not drink or inhale. Keep away from heat, sparks, flames and other ignition sources. Store below 120F. Use only in a well-ventilated area. Do not store in open or unlabeled containers. Avoid contact with eyes. FIRST AID: If swallowed, give one or two glasses of water. Call physician, hospital emergency room or Poison Control Center immediately. Get prompt attention. Eyes: Flush with water for 15 minutes and get prompt medical attention.

KEEP OUT OF REACH OF CHILDREN.
This product contains a bittering agent.
MSDS Revisions
Previous Version Date: 9/6/2002

Previous Version Information
Section 9. - Appearance

Other
No information available

Prepared By:
SOPUS Products
P.O. Box 4427
Houston, TX 77210-4453 USA

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