MATERIAL SAFETY DATA SHEET

BASF CORPORATION
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(201) 316-3000

Original Date: 10/15/1991
Revision Date: 10/15/1991

Emergency Telephone: (800) 424-9300 (CHEMTREC)
(800) 832-HELP (BASF Hotline)

BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS.

SECTION 1 - PRODUCT INFORMATION

Product ID: NVS 547278
ZEREX ANTIFREEZE

Common Chemical Name:
INHIBITED ETHYLENE GLYCOL

Synonyms:
ANTIFREEZE

Molecular Formula:
MIXTURE

Molecular Wt.: NOT APPLICABLE
Chemical Family: Glycol

SECTION 2 - INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name:</th>
<th>CAS #:</th>
<th>Amount:</th>
<th>PEL/TLV Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>85.0 - 95.0 %</td>
<td>OSHA CEIL 50 PPM</td>
</tr>
<tr>
<td>PHOSPHORIC ACID, DIPOTASS</td>
<td>7758-11-4</td>
<td>2.0 %</td>
<td>FINAL NOT ESTABLISHED</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td></td>
<td>4.0 %</td>
<td>NOT ESTABLISHED</td>
</tr>
<tr>
<td>Diethylene glycol</td>
<td>111-46-6</td>
<td>0.0 - 10.0 %</td>
<td>NOT ESTABLISHED</td>
</tr>
</tbody>
</table>
SECTION 2 - INGREDIENTS

Chemical Name: | CAS #: | Amount: | PEL/TLV Data:
--- | --- | --- | ---
I - Denotes an IARC listed carcinogen | | | |
N - Denotes an NTP listed carcinogen | | | |
O - Denotes an OSHA carcinogen | | | |
H - Denotes an OSHA health hazard | | | |
P - Denotes an OSHA physical hazard | | | |
C - Denotes a CERCLA listed chemical | | | |
See section 10A for SARA-313 list.

SECTION 3 - PHYSICAL PROPERTIES

Color: | Green
Form/Appearance: | Liquid
Odor: | Glycol
Odor Intensity: | Faint

Typical Low-RANGE-High Unit of Measure
Spec. Gravity: | 1.135 | 9.0 - 11.0 SU

Typical Low-RANGE-High Deg. @ Pressure
Boiling Pt: | 330.0 | F 760.0 MM HG
Freezing Pt: | NOT AVAILABLE
Decomp. Tmp: | NOT AVAILABLE

Solubility in Water Description: Infinite
Vapor Pressure: | 18.000 MM HG @ 20.0 DEG. C

SECTION 4 - FIRE AND EXPLOSION DATA

Typical Low-RANGE-High Deg. Method
Flash Point: | 250.0 | F CLEVELAND OPEN CUP
Autoignition: | 775.0 | F NONE SPECIFIED
SECTION 4 - FIRE AND EXPLOSION DATA (Cont.)

Extinguishing Media:
Water fog, alcohol foam, CO2 or dry chemical extinguishing media.

Fire Fighting Procedures:
Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Avoid breathing vapors or fumes of heated product or burning product.

Unusual Hazards:
Vapors from heated (above flashpoint) of product may travel to a source of ignition and flash back.

SECTION 5 - HEALTH EFFECTS

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gasses include inhalation and eye and skin contact.

Acute Overexposure Effects:
Contact with the eyes and skin may result in irritation. Acute overexposure to diethylene glycol and ethylene glycol can cause severe abdominal distress, CNS depression, possibly respiratory and/or kidney failure.

Chronic Overexposure Effects:
Chronic overexposure to diethylene glycol and ethylene glycol can cause liver and kidney damage. Animal studies indicate that ethylene glycol may be embryotoxic and teratogenic by the oral and inhalation routes.

First Aid Procedures - Skin:
Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, get medical attention.

First Aid Procedures - Eyes:
Immediately wash eyes with running water for 15 minutes. If irritation develops, get medical attention.
SECTION 5 - HEALTH EFFECTS (Cont.)

First Aid Procedures - Ingestion:
If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:
Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:
Administration of ethanol may counteract the effects of ethylene glycol, such as metabolic acidosis and renal damage.

First Aid Procedures - Aggravated Medical Conditions:
Individuals with preexisting diseases of the skin, respiratory disorders, or impaired function of the liver/kidneys may have increased susceptibility to excessive exposures.

First Aid Procedures - Special Precautions:
None

SECTION 6 - REACTIVITY DATA

Reactivity - Stability Data:
Stable

Reactivity - Incompatibility:
No data available.

Reactivity - Conditions/Hazards to Avoid:
No data available.

Reactivity - Hazardous Decomposition/Polymerization:
No data available.
Polymerization: Does not occur.
SECTION 6 - REACTIVITY DATA (Cont.)

Reactivity - Corrosive Properties:
Not corrosive.

Reactivity - Oxidizer Properties:
Not an oxidizer

SECTION 7 - PERSONAL PROTECTION

Personal Protection - Clothing:
Gloves, coveralls, apron, boots as necessary to minimize contact.

Personal Protection - Eyes:
Chemical goggles; also wear a face shield if splashing hazard exists.

Personal Protection - Respiration:
If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator.

Personal Protection - Ventilation:
Use local exhaust to control to recommended P.E.L.

Personal Protection - Explosion Proofing:
None required.

SECTION 8 - SPILL-LEAK/ENVIRONMENTAL

Spill/Leak Procedures - General:
Spills should be contained, solidified and placed in suitable containers for disposal in a licensed facility. This material is regulated by CERCLA ("Superfund"). This material is a CERCLA hazardous substance (ethylene glycol having an RQ of 1 lb). Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush area with water.
SECTION 8 - SPILL-LEAK/ENVIRONMENTAL (Cont.)

Spill/Leak Procedures - Waste Disposal:
Incinerate or bury in a RCRA licensed facility. Do not discharge into waterways or sewer systems without proper authority.

Spill/Leak Procedures - Container Disposal:
Dispose of in a licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

SECTION 9 - STORAGE AND HANDLING

Storage and Handling - General:
No special requirements needed.

SECTION 10A - FEDERAL REGULATORY INFORMATION

TSCA Inventory Status:
Listed on Inventory: YES

RCRA Haz. Waste No.:
CERCLA: YES Reportable Qty.: (If YES) 1 LB

SECTION 10B - STATE REGULATORY INFORMATION

State Regulatory Information: (By Component)
CAS #: 107-21-1
NAME: Ethylene glycol
CAS #: 111-46-6
NAME: Diethylene glycol
<table>
<thead>
<tr>
<th>State Regulatory Information: (By Component)</th>
<th>NJ/PA/MA RTK</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #: 7758-11-4</td>
<td>NO</td>
</tr>
<tr>
<td>NAME: PHOSPHORIC ACID, DIPOTASS</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 11 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: NONE

DOT Technical Name: NONE

DOT Primary Hazard Class: NONE

DOT Secondary Hazard Class: NONE

DOT Label Required: NONE

DOT Placard Required: NONE

DOT Poison Constituent: NONE

BASF Commodity Codes: 332 332

UN/NA Code: N/A E/R Guide: N/A

Bill of Lading Description:

ANTIFREEZE PREPARATIONS, PROPRIETARY, ETHYLENE GLYCOL BASE

<table>
<thead>
<tr>
<th>IATA:</th>
<th>CLASS: NONE</th>
<th>P. G. N/A</th>
<th>SHIPPING NAME: ANTIFREEZE PREPARATIONS, PROPRIETARY, ET COL BASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMO:</td>
<td>NONE</td>
<td>N/A</td>
<td>ANTIFREEZE PREPARATIONS, PROPRIETARY, ET COL BASE</td>
</tr>
<tr>
<td>TDG:</td>
<td>NONE</td>
<td>N/A</td>
<td>ANTIFREEZE PREPARATIONS, PROPRIETARY, ET COL BASE</td>
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</tbody>
</table>
SECTION 13 - MANUFACTURER'S INFORMATION

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END OF DATA SHEET