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ETHYLENE GLYCOL - INHIBITED

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HMIS: 2-1-0

NFPA: 1-1-0

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This Material Safety Data Sheet complies with OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

If present, IARC, NTP, and OSHA Carcinogens, are identified with an asterisk (*) in this Section.

<u>Ingredient(s)</u>	<u>Exposure Limits</u>	<u>Percent</u>	<u>Note</u>
*Ethylene Glycol (CAS# 107-21-1)	TLV 39.4 ppm (ceiling) PEL 100 mg/m ³ (ceiling)	95%	

SECTION 3: HAZARDS IDENTIFICATION

Permissible Exposure Limits: Not established for this product. See Section 1 for Component PELs and TLVs.

Effects of Acute Overexposure: CAUTION! HARMFUL IF INHALED. HARMFUL IF SWALLOWED. MAY CAUSE EYE IRRITATION. Repeated or prolonged exposure to the substance can produce kidney damage. Very dangerous in case of ingestion. Very slightly to slightly dangerous in case of skin contact (irritant, sensitizer, permeator), of eye contact (irritation), of inhalation. This product may irritate eyes and skin upon contact.

Eyes: Moderately to severely irritating to the eyes.

Skin: Moderately to severely irritating to the skin.

Breathing: Inhalation can cause drowsiness, narcosis and unconsciousness with exposure to high concentrations.

Swallowing: Ingestion can cause abdominal pain, nausea, vomiting, dizziness, drowsiness.

Primary Route(s) of Entry: Ingestion.

Effects of Chronic Overexposure: The substance is toxic to kidneys, the nervous system, the reproductive system, liver.

Repeated or prolonged exposure to the substance can produce target organs damage.

Medical Conditions Aggravated by Exposure: Not available.

SECTION 4: FIRST AID MEASURES

Eyes: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. Get medical attention.

Skin: Remove contaminated clothing and shoes. Place victim under a deluge shower. If the chemical touches the victim's exposed skin such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. For irritation, get medical attention. Wash contaminated clothing before reuse.

Inhalation: Allow victim to rest in a well ventilated area. Seek immediate medical attention.

Swallowing: Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs however, is not conclusive. Loosen tight clothing such as collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: The lowest known value is CLOSED CUP: 116°C (240.8°F) OPEN CUP: 232°C (240.8°F) (Ethylene Glycol)

Explosive Limit: The lowest known value is 398°C (748.4°F) (Ethylene Glycol)

Extinguishing Media: SMALL FIRE: use DRY chemicals, CO₂, water spray or foam. LARGE FIRE: use water spray, fog or foam. DO NOT use water jet.

Hazardous Decomposition Products: Not available.

Fire Fighting Procedures: Fire fighters should be equipped with appropriate protective apparel and use breathing masks.

Special Fire and Explosion Hazards: Avoid heat, sparks and open flame. When heated to decomposition, it emits acrid smoke and irritating fumes. (Ethylene Glycol).

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill: Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION 7: HANDLING AND STORAGE

Handling: Not available. **Storage:** Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Wear appropriate respirator where ventilation is inadequate.

Ventilation: Local exhaust recommended.

Protective Gloves: Rubber or Neoprene.

Eye Protection: Chemical type goggles, or face shield.

Other Protective Equipment: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<u>Property</u>	<u>Measurement</u>	<u>Property</u>	<u>Measurement</u>
<i>Boiling Point</i>	388.4°F	<i>Specific Gravity</i>	1.12 (water=1)
<i>Vapor Pressure</i>	0.05mm of Hg	<i>Percent Volatiles</i>	Not available
<i>Vapor Density</i>	2.1 (air=1)	<i>Evaporation Rate</i>	Not available
<i>Solubility in Water</i>	soluble	<i>Appearance</i>	liquid
<i>pH</i>	8-10 (basic)		

SECTION 10: STABILITY AND REACTIVITY

Hazardous Polymerization: not available.

Stability: Stable.

Incompatibility: Slightly reactive to oxidizing agents, alkalis.

Condition to avoid: Heat, sparks and open flame.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity to animals: Acute oral toxicity (LD50): 4700 MG/KG (RAT) Acute dermal toxicity (LD50): >5000 mg/kg (rabbit)

Toxicity to humans: The substance is toxic to kidneys, the nervous system, the reproductive system, liver. Very dangerous in case of ingestion. Very slightly to slightly dangerous in case of skin contact (irritant, sensitizer, permeator), of eye contact (irritant), of inhalation.

SECTION 12: ECOLOGICAL INFORMATION

No data available at this time.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all Local, State, and Federal Regulations. Recycle if possible. Consult your local or regional authorities.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Drums-Not regulated; Bulk(>535 gals.) regulated; Other regulated substances, liquid, n.o.s.

SECTION 15: REGULATORY INFORMATION

SARA Title III, Section 313 chemicals: Ethylene Glycol.

TCSA: Ethylene Glycol

DSCL (EEC) Not controlled under DSCL (Europe)

WHMIS class D-2A: Material causing other toxic effects (very toxic).

SECTION 16: OTHER INFORMATION

Keep away from heat, sparks and open flame. Avoid contact with eyes, skin and clothing. Do not ingest. Use only with adequate ventilation. Avoid prolonged or repeated breathing of sprays of mists. Keep container closed when not in use. Treat empty container as hazardous due to product residues.

The information herein is presented in good faith and believed to be correct as of the date hereof. However, Garman Company makes no representation as to the completeness and accuracy thereof. Users must make their own determination as to the suitability of the product for their purposes prior to use.

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End of MSDS