1. IDENTIFICATION

Product name:
Ethylene Glycol-Deionized Water 75/25 mix

Recommended use of the chemical and restrictions on use:
Identified uses: Intended as a heat transfer fluid for closed-loop heat transfer systems such as engine cooling systems and line heaters.

Manufacturer / Responsible party:
Magnum Solvent, Inc.
470 Magnum Dr. NE, Kalkaska, MI 49646
Tel. 800-348-4041

Emergency telephone number:
Chemtrec (800) 424-9300

2. HAZARDS IDENTIFICATION

Hazard classification:
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Acute toxicity - Category 4 - Oral
Specific target organ toxicity - repeated exposure - Category 2 - Oral

Label elements:
Hazard pictograms:

Signal word: WARNING!

Hazards:
Harmful if swallowed.
May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statements:
Do not breathe mist, spray, vapors.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
If swallowed: Call a doctor, a POISON CENTER if you feel unwell.

Get medical advice/attention if you feel unwell.
Rinse mouth.
Dispose of contents/container to an authorized waste collection point

Other hazards:
Not applicable.

3. COMPOSITION INFORMATION

This product is a mixture.

Component	CAS	Concentration
Ethylene glycol	107-21-1	>= 70 - <= 80 %
Water	7732-18-5	>= 20 - <= 30%
Corrosion inhibitors, pH buffers	Trade secret	>= 1 - <= 3.0 %

4. FIRST AID MEASURES

Description of first aid measures:
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Skin contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.
Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Ingestion: Do not induce vomiting. Rinse mouth. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed:
Symptoms/injuries: May cause damage to organs through prolonged or repeated exposure.
Symptoms/injuries after skin contact: May cause moderate irritation.
Symptoms/injuries after eye contact: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after inhalation: May cause irritation, coughing, shortness of breath.
Symptoms/injuries after ingestion: Harmful if swallowed. Swallowing a small quantity of material will result in serious health hazard.

5. FIREFIGHTING MEASURES

Extinguishing media:
Suitable extinguishing media: Carbon dioxide. Water fog. Dry powder. Foam.
Unsuitable extinguishing media: Do not use a heavy water stream.

Special hazards arising from the substance or mixture:
Fire hazard: No particular fire or explosion hazard.

Reactivity: No dangerous reactions known.

Advice for firefighters:
Firefighting instructions: Exercise caution when fighting any chemical fire. Do not allow run-off from firefighting to enter drains or water courses.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions:
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:
Contain spilled material if possible.
Small spills: Absorb with materials such as: Dirt. Sand. Sawdust. Vermiculite. Perlite. Oil-Dri or equivalent filler.
Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling:
Do not swallow. Avoid contact with eyes. Wash thoroughly after handling.

Conditions for safe storage:
Do not store near food, foodstuffs, drugs or potable water supplies. Do not store near food, foodstuffs, drugs, or potable water supplies. Store in a dry, cool and well-ventilated place.
Incompatible products: Strong oxidizers. Strong bases. Strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:
Exposure limits are listed below, if they exist.
Ethylene glycol:
ACGIH: C Aerosol only: 100 mg/m3

Exposure controls:
Engineering controls:
Avoid creating mist or spray. Avoid splashing. Provide local exhaust ventilation of closed transfer systems to minimize exposures.

Personal protective equipment:
Hand protection: In case of repeated or prolonged contact wear gloves.
Eye protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.
Respiratory protection: In case of inadequate ventilation wear respiratory protection. Wear appropriate mask.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Pink or green
Odor:	Characteristic
Odor threshold:	No test data available
pH:	8-9.5
Melting point:	N/A
Freezing point:	<-60F
Boiling point:	237F
Flash point:	closed cup: water boils off
Auto ignition temperature:	801F
Evaporation rate:	<0.8 estimated
Flammability (solid, gas)	N/A
Vapor pressure:	13 mmHg at 20C (68F)
Kinematic viscosity:	7.30 cSt at 20C (68F)
Relative vapor density:	>1
Relative density:	1.108 at 20C (68F)
Solubility in water:	100%
Decomposition temperature:	No test data available
Explosive properties:	No test data available
Partition coefficient:	No test data available
Oxidizing properties:	No test data available
Molecular weight:	No test data available

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reactions known.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

11. TOXICOLOLGICAL INFORMATION

Acute oral toxicity:
Oral toxicity is expected to be moderate in humans due to ethylene glycol even though tests with animals show a lower degree of toxicity. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure.

For Ethylene glycol:
Lethal Dose, Human, adult, 3 Ounces
For Ethylene glycol:
LD40, Rat, male and female, 7,712 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

For Ethylene glycol:
LD40, Rabbit, > 10,600 mg/kg

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material or mist may cause respiratory irritation and other effects.

For Ethylene glycol:
LC40, Rat, 4 Hour, Aerosol, > 6.91 mg/l.

Skin corrosion/irritation:
Brief contact is essentially nonirritating to skin.
Prolonged contact may cause slight skin irritation with local redness.
Repeated contact may cause skin irritation with local redness.

Serious eye damage/eye irritation:
May cause slight temporary eye irritation.
Mist may cause eye irritation.

Sensitization:
For skin sensitization: No relevant data found.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure):
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure):
For Ethylene glycol:
Observations in humans include: Nystagmus (involuntary eye movement). In animals, effects have been reported on the following organs: Kidney.Liver.

Carcinogenicity:
Ethylene glycol did not cause cancer in long-term animal studies.

Reproductive toxicity:
Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals.

Aspiration Hazard:
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Toxicity:

Ethylene glycol:
Acute toxicity to fish: Material is practically non-toxic to aquatic organisms on an acute basis (LC40/EC40/EL40/LL40 >100 mg/L in the most sensitive species tested). LC40, Pimephales promelas (fathead minnow), static test, 96 Hour, 72,860 mg/l, Other guidelines
Acute toxicity to aquatic invertebrates: EC40, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent
Acute toxicity to algae/aquatic plants: ErC40, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 6,400 -13,000 mg/l, Other guidelines
Toxicity to bacteria: EC40, activated sludge, 30 min, 225 mg/l, OECD 209 Test

Persistence and degradability:
Ethylene glycol: Readily biodegradable.

Bioaccumulative potential:

Ethylene glycol:
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water (log Pow): -1.36 Measured

Mobility in soil:
Ethylene glycol: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 40). Partition coefficient (Koc): 1 Estimated.

Other adverse effects:
No additional information available

13. DISPOSAL CONSIDERATIONS

Waste water treatment methods:
Sewage disposal recommendations: Do not dispose of waste into sewer.
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION

DOT:

Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (ethylene glycol)
UN number:	UN 3082
Class:	9
Packing group:	III
Reportable quantity:	Ethylene glycol (5000 LB)

IMO-IMDG: Not regulated for transport
IATA/ICAO: Not regulated for transport

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.
Components: Ethylene glycol 107-21-1

Pennsylvania Worker and Community Right-To-Know Act
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Revision date: 09/07/2018

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.