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Version

1. IDENTIFICATION

Product Identifier

Product Name ASHBURN HFT 400 - HEAT TRANSFER FLUID

Other means of identification

SDS #

Item# L-3570-05

Recommended use of the chemical and restrictions on use

Recommended Use Heat transfer fluid

Details of the supplier of the safety data sheet

Supplier Address

 Ashburn Chemical Technologies
 7403 Wright Rd
 Houston, TX 77041

Emergency Telephone Number

Company Phone Number

832-399-1000

Emergency Telephone (24 hr)

 INFOTRAC 1-352-323-3500 (International)
 1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear
 Fluorescent Orange

Physical State Liquid

Odor very mild

Classification

Acute Toxicity (Oral)	Category 2
Specific Target Organ Toxicity (Repeat Exposure-Oral)	Category 2

Signal Word

WARNING

Hazard Statements

Harmful if swallowed.

May cause damage to organs (kidney) through prolonged or repeated exposure if swallowed.



Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash skin thoroughly after handling.

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

Precautionary Statements - Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ethylene Glycol	107-21-1	80-90
Dipotassium Hydrogen Phosphate	7758-11-4	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES**First Aid Measures**

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash contact areas with soap and water. Remove contaminated clothing and lauder before reuse. If skin irritation occurs: Get medical advice/attention.
Inhalation	Remove from further exposure and keep person at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell or are concerned.
Ingestion	Do not induce vomiting without medical advice. Seek immediate medical attention/advice.

Most important symptoms and effects

Symptoms	See SECTION 11 for delayed and chronic effects.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. DO NOT use stream of water (could cause fire to spread).

Combustion Products/Specific Hazards

Containers may rupture from gas generation in a fire situation.
Liquid mist of this product can burn.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin or eyes. Avoid breathing dust/fume/gas/mist/vapors/spray See SECTION 8 for Personal Protective Equipment
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Environmental Precautions	Prevent entry into waterways, rivers, lakes, drains, surface water, or ground water. Prevent further leakage or spillage if safe to do so. See SECTION 12 for Ecological Information
Methods for Clean-Up	Absorb or cover with dry earth, sand or other non-combustible material. Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. See SECTION 13 for Waste Disposal

7. HANDLING AND STORAGE

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid breathing fumes, vapors, mists, spray. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. See SECTION 8 for Personal Protection. See SECTION 2 for Precaution Statements.
Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not store in open or unlabeled containers. Store in the flowing containers: Carbon steel, stainless steel Store away from heat and open flame. Storage temperature > 40 °F.
Incompatible Materials	Oxidizing agents. Strong alkalis. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH	OSHA	NIOSH STEL
Ethylene Glycol CAS#107-21-1	C 100 mg/m ³ (aerosol)	Final PELs: None listed.	no established RELs - see Appendix D.

Legend: *ACGIH:* American Conference of Governmental Industrial Hygienists *TLV:* Threshold Limit Value
OSHA: Occupational Safety and Health Administration *PEL:* Permissible Exposure Limit
NIOSH: National Institute for Occupational Safety and Health *STEL:* Short Term Exposure Limit

Appropriate engineering controls

Engineering Controls	Provide exhaust ventilation or adequate ventilation is required to keep airborne concentrations of vapors below their respective threshold limit value (TLV). Maintain eye wash fountain and quick-drench facilities in work area.
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	Safety glasses with side shields.
Skin and Body Protection	Chemical or oil resistant clothing is recommended.
Respiratory Protection	Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection
General Hygiene Considerations	Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. Remove contaminated clothing and lauder before reuse

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Characteristic
Appearance	Transparent	Odor Threshold	Not determined
Color	Fluorescent Orange		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	-25 °C / 113 °F (literature)		
Boiling Point/Boiling Range	148 °C / 435 °F		
Flash Point	126.7 °C / 260 °F	Closed Cup	
Evaporation Rate	<0.5		
Flammability	Not determined		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	2.0 mmHg	@ 20°C	
Vapor Density	> 1.0	(Air=1)	
Specific Gravity	1.10-1.15		
Water Solubility	Soluble		
Solubility in other solvents	Not determined		
Dynamic Viscosity	Not determined	@ 38°C (100°F)	
Partition Coefficient	Not determined		
Auto-ignition Temperature	427 °C / 801 °F		

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	Stable under recommended storage conditions.
Conditions to Avoid	Incompatible Materials.
Incompatible Materials	Oxidizing agents. Strong alkalis. Strong acids.
Hazardous Decomposition Products	Carbon oxides. Irritating aldehydes and ketones when heated to combustion.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	May cause slight eye irritation
Skin Contact	Prolonged contact may cause slight skin irritation with local redness.
Inhalation	May cause respiratory irritation.
Ingestion	Harmful if swallowed

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol	8,200 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	2.5mg/L (Rat) 6 h, aerosol

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute Effects	Excessive exposure may cause central nervous system effects,
Chronic Effects	Prolonged skin exposure to large quantities may results absorption of harmful amount

Carcinogenicity	Not determined
Gem Cell Mutagenicity	No data available.
Reproductive Toxicity	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity / Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol 1107-21-1		18,500 - 96 h Oncorhynchus mykiss mg/L LC50		41,000 : 48 h Daphnia magna mg/L EC50

Persistence/Degradability	Not inherently biodegradable
Bioaccumulation	This product is not bioaccumulate
Mobility	No data available.
Other Adverse Effects	No data available

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
DOT	Proper shipping name: OTHER REGULATED SUBSTANCES, LIQUID N.O.S (Ethylene Glycol) UN # 3082; Class 9, Packing Group III Reportablr Quality (RQ) 5,000lbs
ATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA:	All component(s) are compliance with the inventory listing requirements of the US Toxic Substances Control Act
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US Federal Regulations

SARA 311/312 Hazard Categories Acute Health Hazard, Chronic Health Hazard

SARA 313

The following components are subject to reporting levels established by SARA
Title III, Section 313
ETHYLENE GLYCOL CA# 107-21-1

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene Glycol 107-21-1	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	1	1	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	1	0	Not determined

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Revision Note: New Format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet