



MATERIAL SAFETY DATA SHEET

HTF-EG-2 Heat Transfer Fluid Inhibited Ethylene Glycol (Concentrate)

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Ver. Date: 4/6/02

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303-292-0595

SECTION 1 - IDENTIFICATION

Product Name: HTF-EG-2
Product Description: Heat Transfer Fluid – Inhibited Ethylene Glycol (Concentrate)
Chemical Name: Inhibited ethylene glycol, aqueous solution
Chemical Family: Mixture
Formula: Mixture
Synonyms: Heat transfer fluid, coolant
DOT Shipping Name: Not regulated unless shipping container holds at least 10,539lb. Then it is an environmentally hazardous liquid N.O.S., Class 9

SECTION 2 - TYPICAL COMPOSITION

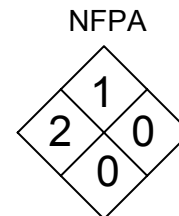
<u>MATERIAL</u>	<u>CAS No</u>	<u>% WT</u>
Ethylene Glycol	000107-21-1	> 95.4%
Dipotassium Phosphate	007758-11-4	< 1.5%
Sodium Molybdate	10102-40-6	< 0.5%
Sodium Nitrate	7631-99-4	< 0.5%
Sodium Nitrite	7632-00-0	< 0.5%
Proprietary Inhibitors	Not applicable	< 0.5%
Deionized Water	007732-18-5	Balance

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

SECTION 3 - HMIS RATINGS

Health: 2
Flammability: 1
Reactivity: 0
Special: 0

0 = minimal 1= slight 2=moderate 3= serious 4= severe



SECTION 4 – PHYSICAL DATA

Appearance and odor:	Colorless, odorless liquid, may contain one of several color dyes.
Boiling Point (760 mm Hg):	300-325°F
Specific Gravity (water =1)(60°F):	1.125-1.135
Vapor Density (air =1):	> 1.0
Solubility in Water (% by wt):	Complete
Vapor Pressure:	7.1mmHg @ 68°F
pH:	9.5-11.0 (as 50% weight solution)

SECTION 5 – HEALTH HAZARD DATA

TLV and source:	Not applicable
Effects of overexposure:	Eyes: Essential non-irritating to eyes. Vapors or mists may irritate eyes.
	Skin contact: Prolonged or repeated exposure not likely to cause significant skin irritation. May cause more severe response if skin is abraded (scratched or cut.)
	Skin Absorption: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The dermal LD50 has not been determined. Repeated skin exposure to large quantities may result in absorption of harmful amounts.
	Ingestion:: Excessive exposure may cause central nervous system effect, cardiopulmonary effect (metabolic acidosis), and kidney failure. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury, even death. The oral LD50 for rats is 8200 mg.kg. Single oral dose toxicity is expected to be moderate to humans even though tests with animals show a lower degree of toxicity.
	Inhalation: At room temperature, vapors are minimal due to low vapor pressure. If heated or sprayed as an aerosol, concentrations may be attained that are sufficient to cause irritation and other effects.
Systemic & Other Effects:	Excessive exposure may cause irritation to upper respiratory tract. Observations in animals include formation of bladder stones after repeated oral doses of diethylene glycol. Observations in animals include kidney and liver effects and deposition of calcium salts in various tissues after long-term animal studies. Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possible only rout of exposure to product birth defects. Exposures by inhalation (tested nose-only in animals to prevent ingestion) or skin contact, the primary routs of occupational exposure, had minimal or essentially no effect on the fetus.
Emergency and First Aid Procedures:	Eye contact: Flush eyes with large amounts of water for 15 minutes. If irritation persists, get medical attention.
	Skin contact: Wash off in flowing water or shower. Wash contaminated clothing before reuse.
	Ingestion: Induce vomiting immediately and seek medical attention. Never give anything by mouth to an unconscious person.
	Inhalation: Remove to fresh air. If breathing has stopped, start artificial respiration. Seek medical attention.
Note to Physician:	If burn is present, treat as any thermal burn, after decontamination. Consult standard literature. Supportive care. Treatment based on the judgement of the physician in response to reactions of the patient. In treatment of intoxication, the use of ethanol, hemodialysis and intravenous fluids to control acidosis should be considered.

SECTION 6 – FIRE AND EXPLOSION HAZARD DATA

Flash Point:	240°F
Method Used:	TCC
Flammable limits in air (% by volume):	LTL:-Not Applicable UFL-Not Applicable
Extinguishing media:	Water, fog, foam, CO ₂ , dry chemical
Special Fire Fighting procedures:	Full protective equipment including positive-pressure, self-contained breathing apparatus. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention.
Unusual Fire and Explosion Hazards:	Closed containers may rupture or explode due to steam pressure build-up when exposed to extreme heat. Water may be used to cool closed containers.

SECTION 7 – REACTIVITY DATA

Stability (conditions to avoid):	No relevant information.
Incompatibility:	Oxidizing material.
Hazardous decomposition products:	None known.
Hazardous polymerization:	Will not occur.

SECTION 8 – SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled:	For small spills, soak up with suitable absorbent material. For large spills, dike and pump into suitable containers. Clean up residual water.
Waste disposal method:	Salvage or burn in approved facilities in accordance with local, state and federal regulations.

SECTION 9 – PERSONAL PROTECTION INFORMATION

Exposure Guideline(s):	Ethylene glycol: ACGIV TLV and OSHA PEL are 50ppm ceiling. Diethylene glycol: EIHA WELL is 50ppm, total; 10 mg/m ³ , aerosol only.
Respiratory protection:	If personal exposure cannot be controlled below applicable exposure limits by ventilation, wear respiratory devices approved by NIOSH/MSHA, for protection against organic vapors, dust, fumes and mists.
Ventilation:	Local exhaust is recommended.
Protective gloves:	Where skin contact may occur, chemical-impervious gloves should be worn.
Eye protection:	Use chemical goggles or full face shield when the danger of splashing exists
Other protective equipment:	Rubber apron or similar protective clothing to prevent contact with skin or clothes.

SECTION 10 – ADDITIONAL PRECAUTIONS

Alkaline irritant:	Avoid contact with skin, eyes and clothing. Do not take internally. Clean up spills immediately.
Precautions to be taken in handling and storage:	Keep containers tightly closed when not in use. Store only in containers that are resistant to alkaline solutions with a pH of 9.0-12.0.
Regulatory Information: (Not meant to be all-inclusive – selected regulations represented.)	Notice: The information herein is presented in good faith and believed to be accurate as the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. Regulations:

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Heat Transfer Fluid	000107-21-1	51-53% (wt)
Inhibited Ethylene Glycol		

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: An immediate health hazard, A delayed health hazard.

SECTION 11 – GENERAL COMMENTS

THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not apply.

CONSULT ADDITIVES INC. FOR FURTHER INFORMATION.