LUBRI-LOY®
PREMIUM LUBRICANTS & GREASES

THE LUBRI-LOY COMPANY
701 Market St, Ste 110 PMB 1025
Saint Louis, MO 63101
Phone 636-561-5007
LUBRILOY.COM

MATERIAL SAFETY DATA SHEET

HFNH1

LUBRI-LOY FOOD GRADE WATER-GLYCOL FIRE RETARDANT H1 HYDRAULIC FLUID

ISO 46

DATE ISSUED: 7/20/09 **REPLACES ISSUE:** New Issue

I PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

Product Name	Lubri-Loy Food Grade Water-Glycol Fire Retardant H1 Hydraulic Fluid ISO 46
Chemical Family	Propylene Glycol based
Chemical Name	Non-Toxic Hydraulic Fluid
Date Issued	7/20/09
Replaces Issue	New Issue
24-Hr. Emergency Phone	CHEMTREC (800) 424-9300/(703) 527-3887

II COMPONENTS AND HAZARD INFORMATION

CHEMICAL NAME	CAS NUMBER	RANGE % BY WT.
Propylene Glycol, USP	57-55-6	35 – 96
Water	7732-18-5	35 – 96
Proprietary ingredients		10 - 55

(See Section 8, "Exposure Controls/Personal Protection", for exposure guidelines.)

NFPA Code	Health-1, Flammability-1, Reactivity-0
HMIS Code	Health-1, Flammability-1, Reactivity-0

III HEALTH AND HAZARD INFORMATION

Emergency Overview	Low hazard for usual industrial or commercial handling by trained personnel.
POTENTIAL HEALTH EFFECTS:	
Eye Contact	May cause minor eye irritation.
Skin Contact	No significant health hazards identified.
Ingestion	If more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur. Aspiration during ingestion or vomiting may cause lung damage.
Inhalation	No significant health hazards identified, unless aspirated.
Effects of Repeated Exposure	In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

IV PRIMARY ROUTES OF ENTRY/EMERGENCY AND FIRST AID PROCEDURES

Eye	In case of eye contact, immediately flush eyes with cool water for at least 20 - 30 minutes. Retract eyelids often. Obtain emergency medical information if pain, blinking, tears or redness persist.
Skin	Wash exposed area of skin with soap and water. If skin irritation or an allergic skin reaction develops, get medical attention.
Ingestion	DO NOT induce vomiting, as aspiration may cause lung damage; seek medical attention. No specific antidote
Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.

V FIRE AND EXPLOSION HAZARD INFORMATION

Flash Point	No Data Available
Method Used	N/A
Flammable Limits	LEL (% vol. in air): Not Determined UEL (% vol. in air): Not Determined
Autoignition Temperature	No Data Available
Flammability Classification	Not Flammable
Extinguishing Media	Dry extinguishing media, foam, water fog.
Unusual Fire and Explosion Hazards	Heat from fire can generate flammable vapor. When mixed with air and exposed to an ignition source, vapors may burn in open or can explode if confined. Vapors may travel long distances along the ground before igniting and flashing back to the source. Fine sprays/mists may be combustible at temperatures below normal flash point.
Firefighting Equipment	Firefighters should wear self-contained breathing apparatus in the positive-pressure mode with a full headpiece when there is a possibility of exposure to smoke, fumes, or hazardous combustion products.
Hazardous Combustion Products	Incomplete burning can produce carbon monoxide and/or carbon dioxide and other toxic gases.

VI ACCIDENTAL RELEASE MEASURES

Absorb spill with inert solids such as sand or soil; sweep up and dispose of in accordance with federal, state, and local regulations. For large spills, dike around spill and pump into suitable containers.

Environmental Precautions	Prevent from entering in to soil, ditches, sewers, waterways and/or groundwater.

VII HANDLING AND STORAGE

Handling	No special requirements.
Storage	Store in a cool, well-ventilated area in sealed containers. Store away from strong oxidizing agents or combustible material. Keep away from sources of ignition. No explosion proofing is necessary.

VIII PROTECTION AND PRECAUTIONS PRECAUTIONS-

Eye	Chemical splash goggles and/or face shield must be worn when possibility exists for eye contact. Contact lenses should not be worn.
Skin	Not normally considered a skin hazard.
Inhalation	Avoid breathing mist. If ventilation is inadequate, use NIOSH/MSHA certified respirator that will protect against dust/mist.
Engineering Controls	Maintain airborne concentrations below the recommended exposure limits. Good general ventilation (10 air changes per hour) should be sufficient for most conditions.
Exposure Guidelines	Limits: OSHA PEL: Not established. ACGIH TLV: Not established. AIHA WEEL: Not established.

IX PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear and light yellow, slightly viscous liquid.
Odor	Little or no odor.
pH	8.5 – 10.5
Vapor Pressure	Not Determined
Vapor Density (Air=1)	Not Determined
Boiling Point	215°F
Freezing Point	Not Determined
Solubility	Complete in water (soluble in all proportions).
Specific Gravity	1.06 @ 25°C/25°C (77°F)
Viscosity (Brookfield)	51.6 cSt @ 100°F

X STABILITY AND REACTIVITY

Stability	Stable.
Conditions to Avoid	Avoid excessive heat and open flames.
Materials to Avoid	Avoid chlorine, fluorine, and other strong oxidizers as well as strong acids.
Hazardous Decomposition	Incomplete combustion may result in carbon monoxide and carbon dioxide.
Hazardous Polymerization	Will not occur.

XI TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY DATA:

Eye Irritation (rabbit)	Non-irritant.
Skin Irritation (rabbit)	None.
Skin Sensitization (human)	Not Determined
Dermal LD50	Not Determined
Oral LD50	Not Determined
Inhalation LC50	Not Determined

OTHER TOXICITY DATA:

High concentrations of propylene glycol in water when held in contact with human skin under closed conditions have been reported to cause skin irritation (Cosmetics and Toiletries 99:83-91, 1984). The authors attribute the observations to a sweat retention reaction by skin. No reactions were observed in open patch tests with human subjects.

XII ECOLOGICAL INFORMATION

It has the following properties: a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to persist in the environment, and a low potential to bio-concentrate. It is expected to have the following properties: a low potential to affect secondary waste treatment microbial respiration, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination and/or early growth of some plants, a low potential to affect the growth of some plant seedlings, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

XIII DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws.

XIV TRANSPORTATION INFORMATION

U.S. Department of Transportation	Not classified as a dangerous good under transport regulations.
INTERNATIONAL INFORMATION:	
Sea (IMO/IMDG) Status	Not regulated.
Air (ICAO/IATA) Status	Not classified as a dangerous good under transport regulations.

XV REGULATORY INFORMATION

CERCLA Sections 102A/103 Hazardous Substances (40 CFR Part 302.4)	Not reportable.
SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370)	Not hazardous.
SARA Title III Section 313 (40 CFR Part 372)	None.
U.S. Inventory (TSCA)	Listed.
Carcinogenicity Classification	Not hazardous by OSHA.
California Safe Drinking Water and Toxic Enforcement Act of 1988-Proposition 65	Not listed.
Pennsylvania Hazardous Substances List	Propylene Glycol.

XVI OTHER INFORMATION

The information contained on this MSDS is been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations. The environmental information and hazardous materials identification system have been included by LUBRI-LOY in order to provide additional health and hazard classification information. The ratings recommend are based upon the criteria supplied by the developers of these rating systems, together with LUBRI-LOY's interpretation of the available data. Proper personal protective equipment varies widely with conditions of use and anticipated exposure.