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MATERIAL SAFETY DATA SHEET

EMERGENCY OVERVIEW
This slippery liquid has a mild glycol odor. No significant immediate hazards for emergency response are known.

NFPA RATING: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GENERIC NAME: POLYETHER POLYOL FLUID **ISSUE DATE:** **February 23, 2009**

THIS LUBRICANTS USA PRODUCT IS: **PAG GEAR LUBES**

CAS NUMBER: Mixture
SYNONYMS / GENERAL NAMES: Synthetic Gear Fluid
24 HOUR EMERGENCY TELEPHONE: (CHEMTREC) 1-800-424-9300
TECHNICAL INFORMATION: 1-800-442-5823

2. COMPOSITION / INFORMATION ON INGREDIENTS / HAZARDOUS INGREDIENTS

COMPONENTS	CAS NO.	%	HAZARD DATA
Proprietary blend (ethylene-vinyl ester, copolymer)	Proprietary	20-30	
Diester	Proprietary	60-80	
Proprietary additives	Proprietary	5-10%	

3. HAZARDOUS IDENTIFICATION

ROUTES OF ENTRY:	Inhalation, eye contact, ingestion.
TARGET ORGANS:	Eyes.
IRRITANCY:	EYES: This product can cause mild, transient, eye irritation with short-term contact with liquids or sprays. LUNGS: It may be a respiratory irritant. Irritation is transient with no permanent damage expected. SKIN: Not a known irritant.
INGESTION:	May be harmful if swallowed. Nausea, vomiting, lethargy or diarrhea.
INHALATION:	Nausea, headache or dizziness. Aspiration of liquid into the lungs can cause severe lung damage or death.
REPRODUCTIVE EFFECTS:	No known effects.
CANCER INFORMATION:	This product is not known or reported to be carcinogenic by any reference source. This product is also not known or reported to be mutagenic.
CHRONIC EXPOSURE SYMPTOMS	No data.

4. FIRST AID MEASURES

EYES:	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness or pain persists.
DERMAL:	Not a skin irritant. Wash off substance (water insoluble). Remove contaminated shoes and clothing, wipe off excess material. Wash exposed skin with soap and water. Seek medical

	attention if tissue appears damaged or if irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods.
INGESTION:	Induce vomiting. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.
INHALATION:	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, a qualified individual should administer 100 percent humidified oxygen. Seek medical attention immediately. Keep the affected individual warm and at rest.
INJECTION:	NA

5. FIRE FIGHTING MEASURES

FLASH POINT, °C(°F): >238°C (>450°F)
FLAMMABLE LIMITS (% BY VOLUME): **LOWER:** NO DATA **UPPER:** NO DATA
EXTINGUISHING MEDIA: Use dry chemical, foam, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: N/A
AUTOIGNITION TEMPERATURE: N/A
EXPLOSION DATA: N/A
NFPA RATING: **HEALTH:** 1 **FLAMMABILITY:** 0 **REACTIVITY** 0

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard—do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spills as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will not readily mix with water. Comply with all laws and regulations.

Ecotoxicity Ecological effects testing has not been conducted on this fluid.

Environmental fate An environmental fate analysis has not been conducted on this specific product. However, plants and animals may experience harmful or fatal effects when coated with this material. This material is insoluble in water and will usually float on the surface of water. (Note that its density is nearly the same as water.) It is likely to coat water based flora and fauna.

7. HANDLING AND STORAGE

HANDLING & STORAGE PROCEDURES: Avoid water contamination and extreme temperatures to minimize product degradation. Keep container closed. Do not store with strong oxidizing agents. Do not store at temperatures above 120°F or in direct sunlight for extended periods of time.

Empty containers may contain product resides that can ignite with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:	Provide exhaust ventilation or other engineering controls to keep the airborne concentration of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the workstation.
GLOVES PROTECTION:	Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat protective gloves when handling product at elevated temperatures.
EYE	Safety glasses equipped with side shields should be adequate protection under most

PROTECTION:	conditions of use. Wear goggles and/or face shield if splashing or spraying is likely. Have suitable eye wash water available.
RESPIRATORY PROTECTION:	Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
CLOTHING RECOMMENDATION:	Avoid prolonged and/or repeated skin contact, especially after this product has been used. If splashing or spraying is expected chemical-resistant (Tyvek®, nitrile or neoprene) clothing should be worn. This might include long-sleeves, apron, slicker suit, boots and additional facial protection. If general contact occurs, promptly remove soaked clothing and take a shower.
OTHER COMMENTS:	Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. This material is soluble in water and is incompatible with hydrocarbons so DO NOT use gasoline, kerosene or solvents or harsh abrasives as skin cleaners. Since standards/control limits have not been established for this product, the exposure limits shown below are suggested as minimum control guidelines.
Occupational exposure guidelines	Applicable workplace exposure levels TWA: 5 STEL; 10 (mg/M^3) from ACGIH (TLV)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	clear pale yellow liquid
ODOR:	Mild glycol odor
pH:	N/A
VAPOR PRESSURE, mm Hg (25°C):	no data
VAPOR DENSITY:	>1 (Air =1)
MELTING POINT:	NA (Pour point –46 C, -50 F)
BOILING POINT, 760 mm Hg, °C:	decomposes before boiling
SOLUBILITY IN WATER:	insoluble in cold water.
SPECIFIC GRAVITY:	1.0 (Water = 1)
EVAPORATION RATE:	N/A
VISCOSITY 40°C (100°C)	220-680 cSt @ 40 C
MOLECULAR WEIGHT:	N/A
PERCENT VOLATILE:	Negligible volatility

10. STABILITY AND REACTIVITY

STABILITY:	Stable
INCOMPATIBILITY:	Strong oxidizers
POLYMERIZATION:	Not expected to occur
THERMAL DECOMPOSITION:	CO_2, CO, smoke, fumes and unburned hydrocarbons.

11. TOXICOLOGICAL INFORMATION

TOXICITY (finished fluid):	INHALED-- LC 50 NOT AVAILABLE. DERMAL LD 50 >2 g/kg (rabbit) ORAL LD 50 3 g/kg (rat) Aquatic toxicity—no data.

12. HEALTH INFORMATION

HMIS CODE:	**HEALTH:**	**1**	**FIRE:**	0	**REACTIVITY:**	**0**	

No	**HIGHLY TOXIC**	No	**SENSITIZER**

No	**TOXIC**	No	**REPRODUCTIVE EFFECTS**
No	**CORROSIVE**	No	**MUTAGEN**
No	**IRRITANT**		

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Determine compliance status with all applicable requirements prior to disposal.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME:	Polyalkylene glycol fluid
HAZARD CLASS:	Not a DOT controlled material (United States).
HAZARD IDENTIFICATION NUMBER:	N/A
DOT PLACARD:	N/A
COMPATIBILITY CATEGORY:	N/A

15. REGULATORY INFORMATION

SARA SECTION 313 - TOXIC CHEMICALS:
This product contains no products listed under SARA Section 313 and 40 CFR Part 372.

SARA SECTION 311 - HAZARD CATEGORIES:
This product may meet one or more of the criteria for the hazard categories defined in 40 CFR Part 370 as established be Sections 311 and 312 of SARA as indicated below: None.

NO	**IMMEDIATE (ACUTE) HEALTH HAZARD**	NO	**SUDDEN RELEASE OF PRESSURE HAZARD**
NO	**DELAYED (CHRONIC) HEALTH HAZARD**	NO	**REACTIVE HAZARD**
NO	**FIRE HAZARD**		

SARA SECTION 302 – EXTREMELY HAZARDOUS WASTE:
This product is not known to contain any components in concentrations greater than one percent that are listed as Extremely Hazardous Substances in 40 CFR Part 355 pursuant to the requirements of Section 302(a) of SARA.

CLEAN WATER ACT (CWA):
Under the CWA, discharges of crude oil and petroleum products to surface water without proper Federal and State permits must be reported immediately to the National Response Center at (800) 424-8802.

CERCLA HAZARDOUS SUBSTANCES:
No components of these products are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are not identified) or are present at levels which could require reporting.

U.S. TSCA INVENTORY
All components of this material are listed on the U.S. TSCA Inventory.

CALIFORNIA PROPOSITION 65
WARNING. This product contains the following chemical(s) know to the State of California to cause cancer: None.

This product contains the following chemical(s) know to the State of California to cause cancer and birth defects or other reproductive harm: None.

CALIFORNIA SCAQMD rule 443.1 (South Coast Air Quality Management District, labeling of materials containing organic solvents): Not applicable. None.

NEW JERSEY RIGHT-TO-KNOW LABEL

Lubricating fluid

Pennsylvania (Worker & community right to know act): This product is subject to the worker and community right to know act. This product contains no known components which could require identification in the MSDS.

Massachusetts (Hazardous Substances Disclosure by Employers): the following components of this product appear on the Massachusetts Substance List and are present at levels which should require identification on the MSDS: None.

ADDITIONAL REGULATORY REMARKS
None.

16. OTHER INFORMATION

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information was prepared for the guidance of plant engineering, operations and management and for persons working with or handling this product. Lubricants USA believes this information to be reliable and up to date as of the date of publication, but makes no warranty that it is.

NFPA HAZARD RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4
HMIS HEALTH RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4

AP = approximately EQ = equal > = greater than < = less than NA = not applicable
ND = no data NE = not established

ACGIH = American Conference of Governmental Industrial Hygienists
AIHA = American Industrial Hygiene Association
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act (1980)
EPA = Environmental Protection Agency
HMIS = Hazardous Materials Information System
IARC = International Agency for Research on Cancer
NFPA = National Fire Protection Association
NIOSH = National Institute of Occupational Safety and Health
NLGI = National Lubricating Grease Institute
NPCA = National Paint and Coating Manufacturers Association
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
RQ = Reportable quantity
SARA = Superfund Amendments and Reauthorization Act (1986)
TSCA = Toxic Substance Control Act