



SILVER FERN CHEMICAL, INC.

## Safety Data Sheet

Polyethylene Glycol (PEG) 600

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### SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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**Substance** Polyethylene Glycol (PEG) 600  
**Synonyms** Polyoxyethylene glycol; LIPOXOL 600 (Trade Name)  
**Use** Intermediate, Heat transfer medium, Emulsifier, Industrial & Institutional cleaning, Lubricant or lubricant additive, Paper Chemical, Paint and Coatings, Surfactant, Textile, Additive for viscosity adjustment  
**Company** **Details of the supplier of the safety data sheet**  
Silver Fern Chemical, Inc.  
2226 Queen Anne Avenue North  
Seattle WA 98109, USA  
Phone: 1-866-282-3384  
Email: info@silverfernchemical.com

**Emergency telephone number**

24 Hour Emergency Contact: Infotrac 1-800-535-5053  
Outside USA & Canada 1-352-323-3500

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### SECTION 2 HAZARDS IDENTIFICATION

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Not a hazardous substance or mixture according to OSHA HCS 2012.

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### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Polyethylene glycol	25322-68-3	100

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

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### SECTION 4 FIRST AID MEASURES

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**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

**Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

**Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

## SECTION 5 FIREFIGHTING MEASURES

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### FLAMMABLE PROPERTIES

**Fire/explosion** NFPA Class IIIB combustible liquid.

**Suitable extinguishing media** Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information** Keep containers and surroundings cool with water spray. Do not use a solid water stream as it may scatter and spread fire.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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**Methods and materials for containment and cleaning up** Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

## SECTION 7 HANDLING AND STORAGE

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**Safe handling advice** Take precautionary measures against static discharges.

**Storage/Transport pressure** Ambient

**Load/Unload temperature** 30 - 40 °C  
86 - 104 °F

**Storage and handling materials** Suitable: Carbon steel

**Further information on storage conditions** Mix thoroughly before use. When stored in the liquid form, PEGs should be padded with a dry inert gas, such as nitrogen, to prevent oxygen or air from entering the tank. Prolonged storage in the presence of air or oxygen may cause product degradation. Oxidation is not expected when stored under a nitrogen atmosphere. Use dry inert gas having at least -40°C (-40°F) dew point.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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### ENGINEERING MEASURES

Ensure adequate ventilation, especially in confined areas. Trace amounts of ethylene oxide may be present in the product and could accumulate in vapor spaces of storage or transport vessels.

### PERSONAL PROTECTIVE EQUIPMENT

**Eyes** Safety glasses with side-shields

**Skin** Wear suitable protective clothing, gloves and eye/face protection.

**Inhalation** Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.

## EXPOSURE GUIDELINES

Components	Exposure limit(s)
<b>1,2-Ethanediol</b>	ACGIH STEL (Short Term Exposure Limit) 10 mg/m <sup>3</sup> (inhalable fraction)
	ACGIH TLV (8-hour) 25 ppm (vapor fraction)
	ACGIH STEL (Short Term Exposure Limit) 50 ppm (vapor fraction)

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	liquid;
<b>Colour</b>	light yellow
<b>Form</b>	liquid
<b>Odour</b>	sweet; pungent
<b>Odour Threshold</b>	No data available
<b>Flash point</b>	estimated 270 °C, 520 °F;
<b>Flammability</b>	Upper explosion limit: No data available Lower explosion limit: No data available
<b>Boiling point/boiling range</b>	Not applicable
<b>Melting point/range</b>	Pour point: 19 °C, 66 °F;
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Density</b>	1.11 g/cm <sup>3</sup> @ 40 °C, 104 °F;
<b>Relative density</b>	No data available
<b>Water solubility</b>	completely soluble
<b>Viscosity</b>	60 cSt @ 40 °C, 104 °F;
<b>Viscosity, dynamic</b>	66 mPa.s @ 40 °C, 104 °F;
<b>pH</b>	4.5 - 7.5
<b>Partition coefficient: n-octanol/water</b>	No data available

## SECTION 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	Stable at normal ambient temperature and pressure.
<b>Chemical stability</b>	No decomposition if stored and applied as directed.
<b>Conditions to avoid</b>	Exposure to moisture Reacts slowly with air or oxygen.
<b>Hazardous decomposition products</b>	When storing this product in air or oxygen, decomposition may occur, generating vapors which could be irritating. Ensure adequate ventilation, especially in confined areas. Oxidation is not expected when stored under a nitrogen atmosphere.
<b>Materials to avoid</b>	Can react with strong oxidizers, inorganic acids, and halogens.
<b>Hazardous polymerisation</b>	None.

## SECTION 11 TOXICOLOGICAL INFORMATION

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<b>Acute dermal toxicity</b>	LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 402 Category approach
<b>Acute inhalation toxicity</b>	No data available
<b>Acute oral toxicity</b>	LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 401 Category approach
<b>Skin corrosion/irritation</b>	(Rabbit): OECD Test Guideline 404 slightly irritating Category approach  (Rabbit): OECD Test Guideline 405 Slightly irritating to the eyes. Category approach
<b>Respiratory or skin sensitisation</b>	Guinea pig: OECD Test Guideline 406 not sensitizing Category approach  <b>Genotoxicity in vitro:</b> Type: Ames test; OECD Test Guideline 471 System: Salmonella typhimurium; with and without metabolic activation Result: not mutagenic  <b>Genotoxicity in vivo:</b> No data available  <b>Assessment Mutagenicity:</b> Based on available data, the classification criteria are not met.

**Reproductive toxicity** **Reproductive toxicity:**  
No data available

**Assessment Reproductive toxicity:**  
No data available

**Teratogenicity:**  
No data available

**Assessment teratogenicity:**  
No data available

**STOT - single exposure** The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT - repeated exposure** Rat; Oral; 90-day; NOAEL: 1,128 mg/kg  
LOAEL: 2,820 mg/kg  
Category approach  
(literature value)  
  
Target Organs: Kidney

**Aspiration toxicity** Not applicable

**Carcinogenicity** **Assessment carcinogenicity:**  
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

## **ECOLOGICAL INFORMATION**

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**Toxicity to fish** LC50 (Cyprinus carpio (Carp)) 96 hours: > 100 mg/l; semi-static test; OECD Test Guideline 203  
Category approach

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 48 hours: > 100 mg/l; static test; OECD Test Guideline 202  
Category approach

**Toxicity to algae** EC50 (Desmodesmus subspicatus (green algae)) 72 hours: > 100 mg/l; static test; OECD Test Guideline 201  
Category approach

**Chronic toxicity to fish** No data available

**Chronic toxicity to aquatic invertebrates**

No data available

**Toxicity to bacteria** EC50 (Pseudomonas putida) : > 10000 mg/l; Cell multiplication inhibition test; DIN 38412  
Category approach

**Biodegradation** Readily biodegradable. OECD Test Guideline 301A (21 d): > 70 %  
Category approach

**Bioaccumulative potential** BCF: 3.16; QSAR

**Mobility in soil** QSAR  
Koc: 10  
Not expected to adsorb on soil.  
The substance and its relevant degradation products decompose rapidly.

**Other adverse effects** No data available

## **SECTION 13 DISPOSAL CONSIDERATIONS**

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**Waste Code** Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations.

**Disposal methods** Dispose of only in accordance with local, state, and federal regulations.

**Empty containers.** Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

## **SECTION 14 TRANSPORT INFORMATION**

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**DOT** not regulated

**IATA** not regulated

**IMDG** not regulated

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**Remarks** No data available

## **SECTION 15 REGULATORY INFORMATION**

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### **U.S. FEDERAL REGULATIONS**

#### **TSCA Inventory Listing**

##### **Components**

Poly(oxy-1,2-ethanediyl),.alpha.-hydro-.omega.-hydroxy-

All chemical substances in this product are either on the TSCA Active Inventory, or in compliance with the inventory.

##### **CAS-No.**

25322-68-3

#### **SARA 302 Status**

##### **Components**

##### **CAS-No.**

##### **Weight percent**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### **SARA 311/312 Classification**



Should this product meet EPCRA 311/312 Tier reporting criteria of 40 CFR 370, refer to Section 2 of this SDS for appropriate classification and Section 3 for components that meet the hazardous classification.

#### SARA 313 Chemical

##### Components

1,2-Ethanediol

##### CAS-No.

107-21-1

##### Weight percent

< 0.1 %

#### US. EPA CERCLA Hazardous Substances (40 CFR 302)

##### Components

1,2-Ethanediol

##### Reportable Quantity

5,000 LB

##### Weight percent

< 0.1 %

### INTERNATIONAL REGULATIONS

#### WHMIS Classification

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS).

#### European Union

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### Australia. Inventory of Chemical Substances (AICS)

Listed

#### Japan. Inventory of Existing and New Chemical Substances (ENCS)

Listed

#### Japan. ISHL - Inventory of Chemical Substances

Listed

#### Canada. Domestic Substances List (DSL) Inventory

Listed

#### Canada. Non-Domestic Substance Listing (NDSL)

Not listed

#### Philippines. Inventory of Chemicals / Chemical Substances (PICCS)

Listed

#### Korea. Existing Chemicals Inventory (KECI)

Listed

#### China. Inventory of Existing Chemical Substances (IECSC)

Listed

#### Mexico. National Inventory of Chemical Substances (INSQ)

Not listed

#### New Zealand. Inventory of Chemical Substances (NZIoC)

Listed

#### Switzerland. Inventory of Notified New Substances (CHINV)

Listed

#### Taiwan. National Existing Chemical Inventory (NECI)

Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

### STATE REGULATIONS

#### California Prop. 65

##### Components

Ethylene Oxide

1,2-Ethanediol

##### CAS-No.

75-21-8

107-21-1

- ⚠ **WARNING!** This product can expose you to chemicals including Ethylene Oxide (CAS # 75-21-8), which is/are known to the State of California to cause cancer, and
- ⚠ **WARNING!** This product can expose you to chemicals including Ethylene Oxide (CAS # 75-21-8), which is/are known to the State of California to cause birth defects or other reproductive harm. **For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**

PEGs may contain detectable quantities of ethylene oxide and 1,2-Ethanediol which are chemicals on the California Proposition 65 list. The level is typically below 1.0ppm for Ethylene Oxide and below 1% for 1,2-Ethanediol, although it may vary. The manufacturing process is controlled to reduce the residual ethylene oxide and 1,2-Ethanediol content.

## SECTION 16 OTHER INFORMATION

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### HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
<b>HMIS®</b>	1	1	0
<b>NFPA</b>	1	1	0

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**End of Safety Data Sheet**