



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

# MATERIAL SAFETY DATA SHEETS

## SECTION I

### PRODUCT AND COMPANY IDENTIFICATION

**Product: Polyethylene glycol 400**  
**This MSDS is valid for all grades and catalog #'s**

Synonyms: PEG 400; Poly(oxy-1,2-ethanediyl).lpha.-hydro-  
.omega.-hydroxy-

Formula: H(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>OH

Manufacturer: PHARMCO-AAPER  
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Brookfield, Connecticut 06804, USA  
Phone (203) 740-3471  
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CHEMTREC 1-800-424-9300

## SECTION II

### COMPOSITION /INFORMATION ON INGREDIENTS

% by Material CAS # TLV/PEL LC50/LD50  
weight

% by weight	Material	CAS #	TLV/PEL	LC50/LD50
100	Polyethylene glycol 400	25322-68-3	TWA: 10 (mg/m <sup>3</sup> ) from AIHA	ORAL (LD50): Acute: 30200 mg/kg [Rat] DEMAL (LD50): Acute: >20000 mg/kg [Rabbits].

## SECTION III

### HAZARDS IDENTIFICATION

**Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.**

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

## SECTION IV

### FIRST AID

Obtain medical attention for all cases of over-exposure.

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Hazardous Skin Contact:** Not available.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Hazardous Inhalation:** Not available.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Hazardous Ingestion:** Not available.

## SECTION V

### FIRE FIGHTING MEASURES

#### Fire:

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition temperature: Not available.

Flash point: CLOSED CUP: 226.67°C (440°F). OPEN CUP: 231.11°C (448°F).

Flammable limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards:** Slightly flammable to flammable in presence of open flames and sparks, of heat.

**Explosion Hazards:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Extinguishing Media:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Information:** Not available.

## SECTION VI

## SPILL/ACCIDENTAL RELEASE MEASURES

**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities

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## SECTION VII

### HANDLING AND STORAGE

**Precautions:** Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

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## SECTION VIII

### EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:** Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** TWA: 10 (mg/m<sup>3</sup>) from AIHA

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## SECTION IX

### PHYSICAL AND CHEMICAL PROPERTIES

**Physical State/Appearance:** Liquid. ( viscous)

**Molecular Weight:** 400 (380 - 420) g/mole

**Odor:** Odorless.

**Taste:** Not available.

**Color:** Clear

**pH (1% Solution in Water):** Not available

**Boiling Point:** Not available

**Melting Point:** 4°C (39.2°F) - 6 C

**Critical Temperature:** Not available.

**Specific Gravity:** 1.1254 (Water = 1)

**Vapor Pressure (mm Hg):** Not available.

**Vapor Density (Air=1):** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Water/Oil Dist. Coefficient:** Not available.

**Ionicity (in water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** Soluble in cold water, hot water. Readily soluble in aromatic hydrocarbons. Slightly soluble in aliphatic hydrocarbons.

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## SECTION X

### STABILITY/REACTIVITY INFORMATION

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials (strong oxidizers), excess heat.

**Incompatibilities:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Information:** Slightly Hygroscopic

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## SECTION XI

### TOXICOLOGICAL INFORMATION

**Routes of Entry:** Absorbed through skin. Eye contact.

**Toxicity to Animals:** Acute oral toxicity (LD50): 26800 mg/kg [Rabbit]. Acute dermal toxicity (LD50): >20000 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): >13 8 hours [Rat].

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

**Special Information on Toxicity to Animals:** Lethal Dose/Conc 50% Kill: LD50[Guinea Pig] - Route: Oral; Dose: 15700 mg/kg

**Special Information on Chronic Effects/Toxicity on Humans:** Acute Potential Health Effects: Skin: It may cause mild skin irritation. It may be absorbed through the skin, but absorption of harmful amounts is unlikely. Eyes: It may cause mild eye irritation. Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. A single exposure is not likely to be hazardous. Ingestion: Low toxicity. Harmful effects not anticipated from swallowing small amounts. Ingestion of larger amounts may cause nausea, vomiting, cardiac arrhythmias, hypotension. It may also affect the urinary system. Prolonged or repeated ingestion may affect metabolism (weight loss).

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## SECTION XII

### ECOLOGICAL INFORMATION

**Ecotoxicity:** Ecotoxicity in water (LC50): >5000 mg/l 24 hours [Goldfish].

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Information on Products of Biodegradation:** Not available.

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### SECTION XIII DISPOSAL CONSIDERATIONS

**Waste Disposal:** Recycle, if possible. Consult your local or regional authorities.

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### SECTION XIV TRANSPORTATION INFORMATION

**DOT Classification:** DOT Not a DOT controlled material (United States).

**UN:** Not applicable.

**Special Provisions for Transport:** Not applicable.

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### SECTION XV REGULATORY INFORMATION

**Federal and State Regulations:** Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: **NONE**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: **No products were found.**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: **No products were found.**

**Other Classifications:**

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): Not Available

**Protective Equipment:** Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

**References:** Not available.

**Other Special Considerations:** Not available.

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The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.