



Material Safety Data Sheet

Polyethylene glycol 400 MSDS

Section 1: Chemical Product and Company Identification

Product name: Polyethylene glycol 400

Catalogue Code: PEG400

CAS#: 25322-68-3

RTECS:TQ3675000

TSCA: TSCA 8(b) inventory: Polyethylene glycol 400

CI#: Not available

Synonym: PEG-8; PEG 400; poly(oxy-1,2-ethanediyl).alpha.-hydro-,omega.-hydroxy-

Chemical Name: Polyethylene Glycol 400

Chemical Formula: $\text{H}(\text{OCH}_2\text{CH}_2)_n\text{OH}$

Contact Information:

Microlytic North America Inc.

300 Trade Center, Suite 3650

Woburn, MA, 01801 USA

US Sales: 781-376-0780

Website:<http://www.microlytic.com>

Section 2: Composition and Information in Ingredients

Composition:

Name	CAS #	Percent by weight
Polyethylene glycol 400	25322-68-3	50%

Toxicological Data on Ingredients: Polyethylene glycol 400: ORAL (LD50): Acute: 30200 mg/Kg (Rat): 28915 mg/Kg (Mouse). 26800 mg/Kg (Rabbit) DERMAL (LD50): Acute: 20000 mg/kg (Rabbit). VAPOR (LC50): 13 ppm 8 hours (Rat)

Section 3: Hazards Identification

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

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

DEVELOPMENTAL TOXICITY: Not available.

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

Section 4: First Aid Measures

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.

Serious 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.

Serious 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.

Serious Ingestion: Not Available.

Section 5: Fire and Explosion Data

Flammability of the product: May be combustible at high temperature

Auto-Ignition Temperature: Not available

Flash Points: CLOSED CUP: 225.67°C (440 °F). OPEN CUP: 231.11°C (448°F)

Flammable Limits: Not available

Products of Combustion: These products are carbon oxides (CO, C)2)

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

Explosion Hazards in Presence of Various Substances:

Risks of explosion in the product in presence of mechanical impact: Not available

Risks of explosion in the product in presence of static discharge: Not available

Fire Fighting Media and instructions:

SMALL FIRE: Use DRY chemical powder

LARGE FIRE: Use water spray, fog or foam. Do no use water jet.

Special Remarks on Fire Hazards: Not available

Special Remarks on Explosion Hazards: Not available

Section 6: 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.

Section 7: 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 incompatibilities such as oxidizing agents.

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

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold 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.m³) from AIHA

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: liquid (viscous)

Odor: Odorless

Taste: Not available

Molecular Weight: 400 g/mole

Color: Clear

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: 4°C (39.2°F)

Critical Temperature: Not available

Specific Gravity: 1.1254 (water = 1)

Vapor Pressure: Not available

Vapor Density: Not available

Volatility: Not available

Odor Threshold: 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.

Section 10: Stability and Reactivity Data

Stability: The product is stable

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials (strong oxidizing agents), excess heat.

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Slightly Hygroscopic

Special Remarks on Corrosivity: Not available

Polymerization: Will not occur.

Section 11: 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 Remarks on Toxicity to Animals: Not available.

Special Remarks on Other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: may cause mild skin irritation. It may be absorbed through the skin, but absorption of harmful amounts is unlikely.

Eyes: 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).

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): >5000 mg/l 24 hours (Goldfish)

BOD5 and COD: not available

Products of Biodegradation: Possible 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 Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

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

Identification: Not applicable

Special Provisions for Transport: Not applicable

Section 15: Other Regulatory Information

Federal Regulations:

TSCA 8(b) inventory: Polyethylene glycol 400

Other Regulations: Not available

Other Classifications:

WHIMIS (Canada): Not controlled under WHIMIS (Canada)

DSCL (EEC):

Not available

S24/25- Avoid contact with skin and eyes

HMIS (USA):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: g

National fire Protection Association (USA):

Health: 0

Flammability: 1

Reactivity: 0

Specific Hazard:

Protective Equipment:

Gloves

Lab coat

Vapor respirator. Be sure to use an approved/certified respirator or equivalent

Safety glasses

Section 16: Other information

References: Not available

Other Special Considerations: not available

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