USA – According to the OSHA Hazard Communications Standard (HCS) (HAZCOM 2012).

SECTION 1. IDENTIFICATION

Product name: Polyethylene Glycol 400

Recommended use: automotive products, household products, packaging products, petroleum chemicals, plastics, inks, coatings, adhesives, chemical intermediates, rubber processing, lubricants, metalworking fluids, mold release agents, ceramics, and wood treating.

Uses advised against: not for drug, cosmetic/personal care or indirect food applications.

Manufacturer or supplier identification:

Level 7 Chemical
255 Sturgis Rd
Conway, AR 72034

Emergency telephone

Chemtrec (Domestic): 1-703-527-3887 (24 hr.)
Chemtrec (International): 1-800-424-9300 (24 hr.)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 1900.1200: not a hazardous substance or mixture.

Hazards not otherwise classified: no data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: polyethylene glycol

Substance or mixture: this product is a substance.

Component	CAS Number	Concentration
polyethylene glycol	25322-68-3	> 99.0 %

SECTION 4. FIRST AID MEASURES

General advice: if potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: move person to fresh air; if effects occur, consult a physician.

Skin contact: wash off with plenty of water.

Eye contact: flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: no emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: aside from the information found in this section, any additional important symptoms and effects are described in section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed: absorption may be promoted by damaged skin. J Pharm Sci. 1985 Oct;74(10):1062-6; Burns Incl Therm Inj 1982 Sep;9(1):49-52. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing Media

Suitable: water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam - alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function but will be less effective.

Unsuitable: do not use direct water stream; may spread fire.

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to nitrogen oxides, carbon monoxide, carbon dioxide.

Unusual fire and explosion hazards: container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special protective equipment for firefighters: Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: use appropriate safety equipment. For additional information, refer to section 8, Exposure Controls and Personal Protection.

Environmental precautions: prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: contain spilled material if possible. Collect in suitable and properly labeled containers. See section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: see section 8, Exposure Controls and Personal Protection.

Conditions for safe storage: store in original container. Use product promptly after opening. Avoid prolonged exposure to heat and air. Store in the following material(s): stainless steel, polypropylene, polyethylene-lined container, Teflon, glass-lined container Plasite 3066 lined container, Plasite 3070 lined container, 316 stainless steel.

Storage stability/shelf life: use within 36 months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	Regulation	Type of listing	Value/Notation
Polyethylene glycol	US WEEL	TWA aerosol	10 mg/m3

Exposure controls

Engineering controls: use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: safety glasses (with side shields).

Skin protection

Hand protection: use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include butyl rubber, natural rubber (latex), neoprene, nitrile/butadiene rubber (nitrile or NBR), polyethylene. ethyl vinyl alcohol laminate (EVAL), polyvinyl alcohol (PVA), polyvinyl chloride (PVC or vinyl). NOTICE: the selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: when prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Respiratory protection: respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: organic vapor cartridge with a particulate pre-filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color)	liquid, colorless
Odor	mild
Odor Threshold	no test data available
pH	4.5 - 7.5 ASTM E70 (5% aqueous solution)
Melting point/range	not applicable to liquids
Freezing point	4 - 8°C (39 - 46°F) ASTM D1177
Boiling point (760 mmHg)	> 200°C (> 392°F) calculated, decomposes
Flash point	closed cup 227°C (441°F) ASTM D 93
Evaporation Rate (Butyl Acetate = 1)	no test data available
Flammability (solid, gas)	not applicable to liquids
Lower explosion limit	no test data available
Upper explosion limit	no test data available
Vapor Pressure	<< 0.01 mmHg at 20°C (68°F) ASTM E1719
Relative Vapor Density (air = 1)	>10 calculated.
Relative Density (water = 1)	1.127 at 20°C (68°F) / 20° calculated.
Water solubility	completely soluble at 20°C (68°F), measured
Partition coefficient: n- octanol/water	no data available
Auto-ignition temperature	no test data available
Decomposition temperature	no test data available
Kinematic Viscosity	6.8 - 8.0 cSt at 98.9°C (210.0°F) ASTM D 445
Explosive properties	no data available
Oxidizing properties	no data available
Liquid Density	9.392 lb/gallon at 20°C (68°F) ASTM D4052
Molecular weight	380 - 420 g/mol Literature
Percent volatility	no data available
Volatile Organic Compounds	2 g/L EPA Method no. 24

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: no data available.

Chemical stability: thermally stable under typical use temperatures.

Hazardous reactions: polymerization will not occur.

Conditions to avoid: exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: avoid contact with strong acids, strong bases, strong oxidizers.

Hazardous decomposition products: decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: aldehydes alcohols, ethers, carbon dioxide, carboxylic acids, polymer fragments.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely routes of exposure: ingestion, inhalation, skin contact, eye contact.

Acute toxicity

Acute oral toxicity. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. LD50, rat, > 10,000 mg/kg

Acute dermal toxicity. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Prolonged/repeated exposure to damaged skin (as in burn patients) may result in absorption of toxic amounts. LD50, rabbit, > 20,000 mg/kg

Acute inhalation toxicity. At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. For respiratory irritation and narcotic effects: no relevant data found. Typical for this family of materials. LC50, rat, 6 hour, dust/mist, > 2.5 mg/l. No deaths occurred following exposure to a saturated atmosphere.

Skin corrosion/irritation: prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation: may cause slight temporary eye irritation. Corneal injury is unlikely.

Sensitization

Skin: did not cause allergic skin reactions when tested in humans.

Respiratory: no relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure): evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure): recent findings of kidney failure and death in burn patients, as well as some studies using animal burn models, suggest that polyethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients. Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity: did not cause cancer in laboratory animals.

Teratogenicity: for similar material(s): did not cause birth defects in laboratory animals.

Reproductive toxicity: for similar material(s): In animal studies, did not interfere with reproduction.

Mutagenicity: in vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration hazard: based on physical properties, not likely to be an aspiration hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute toxicity to fish. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, Pimephales promelas (fathead minnow), static test, 96 hour, 87,209 mg/l, OECD Test Guideline 203 or equivalent

Acute toxicity to aquatic invertebrates. LC50, Daphnia magna (Water flea), static test, 48 Hour, 53,484 mg/l, OECD Test Guideline 202 or equivalent

Persistence and degradability

Biodegradability: Material is expected to be readily biodegradable.
10-day Window: Pass
Biodegradation: > 60 %
Exposure time: 20 day
Method: OECD Test Guideline 301D or equivalent

Theoretical Oxygen Demand: 1.74 mg/mg

Chemical Oxygen Demand: 1.81 mg/mg

Bioaccumulative potential: no bioconcentration is expected because of the relatively high water solubility.

Mobility in soil: no data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Comply with applicable federal, state, and local regulations. Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal. Dispose of wastes in an approved waste disposal facility. Assure emissions comply with applicable regulations. Avoid overloading/poisoning plant biomass. Landfill at permitted sites. Use registered transporters.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION14. TRANSPORTATION INFORMATION

US Department of Transportation (DOT): not regulated for transport.

Classification for SEA transport (IMO-IMDG): Not regulated for transport. Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code. Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO): not regulated for transport

SECTION 15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312: no SARA hazards.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313: this material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65: this product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA): all components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SECTION 16. OTHER INFORMATION

Version and date of revision: 20200519, May 19, 2020

Date of issue: May 19, 2020

NFPA Classification

Health Hazard: 0
Fire Hazard: 1
Instability: 0

Disclaimer of liability: The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Table of Abbreviations & Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances (AICS)
bw	body weight
bw/day	body weight/day
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
DOT	Department of Transportation
ECx	effect concentration associated with x% response (e.g. EC50)
EINECS	European INventory of Existing Commercial chemical Substances
ELINCS	European LIst of Notified Chemical Substances
ENCS	Existing and New Chemical Substances Inventory (Japan)
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
g/cm^3	grams per cubic centimeter

g/g	grams (chemical) per gram (urine)
GLP	good laboratory practice
HMIS	Hazardous Material Information System
IARC	International Agency for Research of Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IDHL	immediately dangerous to health or life
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KECL	Korea Existing Chemicals List
kg/m3	kilograms per cubic meter
kPa	kilopascal
LC50	50% lethal concentration. Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals.
LD50	50% lethal dose. Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals.
LL	Lethal Loading
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
mg/m3	milligrams per cubic meter
mm2/s	millimeter squared per second
mPa-s	millipascal-second
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NLP	No-Longer Polymers
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Co-operation and Development
OSHA	Occupational Safety and Health Administration
PEL	permissible exposure limits
PICCS	Philippine Inventory of Chemicals and Chemical Substances
ppm	parts per million

RCRA	Resource Conservation and Recovery Act
RQ	reportable quantity
S*	skin notation
SARA	Superfund Amendments and Reauthorization Act
SDS	safety data sheet
STEL	short term exposure limits
STOT	specific target organ toxicity
TCSI	Taiwan Chemical Substance Inventory
TDG	Transportation of Dangerous Goods (Canada)
TLV	threshold limit values
TSCA	Toxic Substance Control Act
TWA	time weight average
UVCB	substance of unknown or variable composition, complex reaction products or biological material
VOC	volatile organic compound