

Produced date: 2012-08-10

Replaces date: 2012-04-16

1. Identification of the substance/preparation and the company

Commercial product name	Polyethylene glycol 400, PEG 400
Use of the substance/preparation	Petroleum chemicals, coatings, lubricants, plastics, inks, detergents, cleaning agent
Synonyms	Ethylene oxide polymer, Poly(oxyethylene) glycol
CAS-nr	25322-68-3
EC-nr	500-038-2
REACH registration number	05-2114142277-51-0000
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2. Hazards Identification

This product is not classified as dangerous according to EC criteria.

3. Composition/Information on ingredients

EC-nr	CAS-nr	Substance	Conc. % (w/w)	Classification
500-038-2	25322-68-3	Polyethylene glycol	100	Not classified as hazardous material.

4. First aid measures

Inhalation	Move person to fresh air; if effects occur, consult a physician.
Skin contact	Take off contaminated clothing. Wash skin 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	Drink plenty of water, activated carbon, saline purge. Do not induce vomiting Do not put anything into the mouth of unconscious person. Call a physician.
Protection of first-aiders	No special precautions required.
Notes to physician	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Use dry chemical, CO ₂ , water spray or alcohol resistant foam.
Extinguishing media which must not be used for safety reason	None
Specific hazards	The product is not flammable nor combustible. Contaminated equipment (brushes, rags) must be cleaned immediately with water. Burning produces obnoxious and toxic fumes. CO, CO ₂ , Nox. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cool containers / tanks with spray water.
Special protective equipment for firefighters	Wear personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions	Sweep-up to prevent slipping hazard. Avoid inhalation of gases. Evacuate personnel to safe areas. Avoid contact with skin and eyes. Wear personal protective equipment.
Environmental precautions	Prevent product from entering drains.
Methods for cleaning up	Adsorb with inert material (e.g. sand, kieselguhr, acid binder, universal binder, sawdust) Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

7. Handling and storage

Storage	Handle in accordance with good industrial hygiene and safety practice for diagnostics. Keep in properly labelled containers. Keep tightly closed in a dry, cool and well-ventilated place.
Handling	Impervious gloves. Wear personal protective equipment. When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

8. Exposure controls/personal protection

Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment.
Hand protection	Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur, <i>e.g.</i> Butylrubber
Skin and body protection	When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material.
Eye protection	Face-shield Safety glasses (EN166)
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical state	Liquid
Colour	Clear
Odour	Odourless-mild
Flash Point - Closed Cup	227 °C
Autoignition Temperature	Not applicable
Vapour pressure	< 0.01 mmHg @ 20 °C
Boiling Point (760 mmHg)	> 250 °C
Vapor Density (air = 1)	>1
Specific Gravity (H₂O = 1)	1.127 20 °C/20 °C
Freezing Point	4-10 °C
Solubility in Water (by weight)	100 % @ 20 °C
pH	5.5-7.5
Molecular mass	375-450 g/mol
Kinematic Viscosity	76-86 cSt @ 20 °C

10. Stability and reactivity

Stability	Stable at normal use conditions/temperatures.
Thermal Decomposition	Burning produces obnoxious and toxic fumes. Possible decomposition products are: Carbon oxides Nitrogen oxides (NOx).
Materials to avoid	Avoid contact with: Strong acids. Strong bases. Strong oxidizers.
Conditions to avoid	Exposure to elevated temperatures can cause product to decompose.

11. Toxicological information

Acute toxicity	Low toxic. Substance of low danger as to adverse health effect. LD ₅₀ = 157000 mg/kg, intragastric, guinea pigs; LD ₅₀ = 28915 mg/kg, intragastric, mice, rats; LD ₅₀ = 9708 mg/kg, intra-abdominal, rats; LD ₅₀ = 7312 mg/kg, intravenous, rats;
Inhalation	At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Maximum attainable concentration. LC50, 8 h, Vapor, Rat > 13 ppm
Skin contact	Prolonged contact may cause slight skin irritation with local redness. Did not cause allergic skin reactions when tested in humans. LD50, Rabbit > 20,000 mg/kg
Eye contact	May cause slight temporary eye irritation. Corneal injury is unlikely.
Ingestion	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. LD50, Rat 29,000 - 39,000 mg/kg
Chronic toxicity	Similar material(s) did not cause cancer in laboratory animals.
Repeated Dose Toxicity	Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
Chronic Toxicity and Carcinogenicity	Similar material(s) did not cause cancer in laboratory animals.
Developmental Toxicity	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.
Genetic Toxicology	In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. Ecotoxicological information

Bioaccumulation	No bioconcentration is expected because of the high water solubility.
Ecotoxicity effects	Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50 greater than 100 mg/L in most sensitive species).
Mobility	Soluble in water
Persistence and degradability	Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
Ecotoxic effects	Fish Acute & Prolonged Toxicity: LC50, fathead minnow (<i>Pimephales promelas</i>), 96 h: > 73,000 mg/l Aquatic Invertebrate Acute Toxicity: LC50, water flea <i>Daphnia magna</i> : > 10,000 mg/l

13. Disposal considerations

Contaminated packaging	Empty containers should be transported/delivered to local recyclers for disposal.
Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.	

14. Transport information

ADR/RID/IMDG	Not classified as dangerous in the meaning of transport regulations.
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15. Regulatory information

European Inventory of Existing Commercial Chemical Substances (EINECS):

This product is a polymer according to the definition in Directive 92/32/EEC (7th Amendment to Directive 67/548/EEC) and all of its starting materials and intentional additives are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) or in compliance with European (EU) chemical inventory requirements.

EC Classification and User Label Information:

This product is not classified as dangerous according to EC criteria; Directive 1999/45/EC.

16. Remaining information

The information in this data sheet is considered to be correct according to present knowledge and experience, but there is no guarantee that it is complete. It is therefore in the user's interest to ensure that the information is sufficient for the area it is intended for.