POLY-G® 540-450

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 09/27/2020 Revision date: 08/18/2020 Supersedes: 04/12/2015 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	:	Substance
Trade name	:	POLY-G® 540-450
Chemical name	:	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1)
IUPAC name	:	Pentaerythritol, propoxylated
CAS-No.	:	9051-49-4
Formula	:	(C3H6O)n(C3H6O)n(C3H6O)n(C3H6O)nC5H12O4
Synonyms	:	Pentaerythritol, propoxylated / PPG pentaerythritol ether

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	chemical intermediate for urethane polymer production
Use of the substance/mixture	:	Chemical intermediate

1.3. Supplier

Monument Chemical
2450 Olin Road
Brandenburg, KY 40108 - USA
T (270)422-6860
sds@monumentchemical.com - www.monumentchemical.com

1.4. Emergency telephone number

Emergency number	:	24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-270-422-6860

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

According to the corresponding national regulations there is no labelling obligation for this product.

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Polymer

Name	Product identifier	%
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (Main constituent)	(CAS-No.) 9051-49-4	99 – 100

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	:	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	:	Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact	:	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	:	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.
Symptoms/effects	:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	:	No effects known.
Symptoms/effects after skin contact	:	Slight irritation.
Symptoms/effects after eye contact	:	Slight irritation.
Symptoms/effects after ingestion	:	Irritation of the gastric/intestinal mucosa.
Chronic symptoms	:	No effects known.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	DIRECT FIRE HAZARD: Combustible. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.
Hazardous decomposition products in case of fire	:	Upon combustion: CO and CO2 are formed.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Protective clothing.
Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, pump into suitable containers. Plug the leak, cut off the supply.
Methods for cleaning up	:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures	:	Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Incompatible materials. Keep container closed when not in use.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents.
Storage area	:	Store in a dry area. Ventilation at floor level. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: carbon steel. stainless steel. HDPE. LDPE (Low Density Poly Ethylene).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)
No additional information available

8.2. Appropriate engineering controls

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Colorless to pale yellow liquid.
Color	:	Colourless to yellow
Odor	:	mild
Odor threshold	:	No data available
pH	:	5 – 7 10/6 Isopropanol / water
Melting point	:	< -100 °C (EU Method A.1: Melting/freezing point)
Freezing point	:	No data available
Boiling point	:	355.4 °C (EU Method A.2: Boiling point)
Flash point	:	190 °C
Relative evaporation rate (butyl acetate=1)	:	No data available

Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	0.000000118 hPa (20 °C, OECD 104: Vapour Pressure)
Relative vapor density at 20 °C	:	> 10
Relative density	:	1.06 – 1.09
Specific gravity / density	:	1.06 – 1.09 g/ml
Molecular mass	:	500 – 600 g/mol
Solubility	:	Soluble in water. Water: 22 °C, miscible, OECD 105: Water Solubility
Partition coefficient n-octanol/water (Log Pow)	:	-1.81 – 0.22 (Calculated, 25 °C)
Auto-ignition temperature	:	365 °C (EU Method A.15: Auto-ignition Temperature (liquids and gases))
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	4130 mPa·s (20 °C, OECD 114: Viscosity of Liquids)
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

VOC content	:	0 %
Other properties	:	Gas/vapour heavier than air at 20°C. Hygroscopic. Slightly volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
LD50 oral rat	20800 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE US (oral)	20800 mg/kg body weight

Skin corrosion/irritation	:	Not classified pH: 5 – 7 10/6 Isopropanol / water
Serious eye damage/irritation	:	Not classified pH: 5 – 7 10/6 Isopropanol / water
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
NOAEL (oral,rat,90 days)	≥ 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Slight irritation.

Symptoms/effects after ingestion : Irritation of the gastric/intestinal mucosa.

Chronic symptoms : No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Slightly harmful to crustacea. Slightly harmful to fishes. Not harmful to activated sludge. Slightly harmful to algae.

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
LC50 fish 1	> 1000 mg/l Pimephales Promelas
EC50 Daphnia 1	≥ 100 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
LOEC (chronic)	> 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
Partition coefficient n-octanol/water (Log Pow)	-1.81 – 0.22 (Calculated, 25 °C)
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
Surface tension	0.03735 N/m (20 °C, 0.1 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Koc)	< 1.25 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information	:	Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9051-49-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

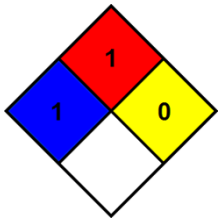
15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date	:	08/18/2020
Other information	:	None.
NFPA health hazard	:	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	:	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	:	0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

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