Propylene Glycol

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / March 26, 2012 / Rules and Regulation

Revision Date: 27-Sep-2021
Supersedes: 31-Jan-2020

1 PRODUCT & COMPANY IDENTIFICATION

Product Name: Propylene Glycol
Synonyms: Propane-1,2-diol
INCI Name: Propylene glycol
CAS Number: 57-55-6
Formula: No data available
Product Form: Liquid
Product Use: Cosmetic use

Distributor: MakingCosmetics Inc.
Address: 10800 231st Way NE
Redmond, WA 98053 (USA)
Phone / Fax: 425-292-9502 / 425-292-9601
Web: **www.makingcosmetics.com**

Emergency Telephone Number: 1-800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

GHS Classification: Not classified
GHS Labeling: Not a dangerous substance according to GHS
GHS Hazard Pictograms: None
GHS Hazard Statements: None
GHS Precautionary Statements: None
Potential Health Hazards: Eyes: May cause irritation of the eyes.
Inhalation: Not expected to be irritant.
Skin: May cause irritation of the skin.
Ingestion: Not expected to be irritant.

NFPA Ratings (704):

Health	N/A	N/A
Flammability	N/A	N/A
Reactivity	N/A	N/A
Specific Hazard	N/A	

3 COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %	Molecular Weight
Propane-1,2-diol[1]	57-55-6	>99.8%	Not Available
Oxydipropanol[1]	25265-71-8	<0.2%	Not Available

[1]Substance is not classified in terms of Regulation (EC) No. 1272/2008 Annex VI

4 FIRST AID MEASURES

Eyes: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or POISON CONTROL CENTER. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

Inhalation: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention if breathing difficulty persists.

Skin: Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If sticky, use waterless cleaner first. Seek medical attention if ill effect or irritation develops.

Ingestion: If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or POISON CONTROL CENTER. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. Do not induce vomiting! IMMEDIATELY transport the victim to a hospital.

Note to Physician: Symptoms of exposure to this compound may include central nervous system depression. Other symptoms may include convulsions. It may cause irritation of the skin and eyes. It may cause primary skin irritation in some people, possibly due to dehydration. Prolonged contact may result in defatting of the skin. It can cause skin

sensitization. Ingestion of large amounts can cause gastro-intestinal upset and diarrhea. A single drop in human eyes has caused immediate stinging, blepharospasm, and lacrimation followed by mild transient conjunctival hyperemia. Severe inhalation of the mist may cause mild irritation of the upper respiratory tract. In children, exposure can cause stupor, tachypnea, tachycardia, diaphoresis and seizures. It can also cause hypoglycemia in children. Very high doses in experimental animals have produced central nervous system depression, hemolysis, and minimal kidney changes.

5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: OSHA/NFPA Class IIIB Combustible Liquid. Use appropriate media (SMALL FIRE: Use dry chemicals, CO2, water spray, or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog, or alcohol-resistant foam.) for adjacent fire. Do not use solid water stream.

Special protective equipment & precautions for firefighters: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/ steam explosion. Burning liquid may float on water. Although water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.

Flash Points: 104°C (220°F)

Specific hazards arising from the chemical: Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal Flash point. See also Stability and Reactivity section.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment & emergency procedures: Do not try to clean up the leak without proper protective equipment. See section 8 for recommendations on the use of personal protective equipment.

Environmental precautions: Do not allow to enter sewers/ surface or ground water. Notify environmental authorities in case of large leaks.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Extinguish ignition sources; stop release; prevent flow to sewers or public waters. Notify fire and environmental authorities. Impound/recover large land spill; soak up small spill with inert solids. Soak up small spills with inert solids. Use suitable disposal containers. On water, material is soluble and may float or sink. Contain/collect rapidly to minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

7 HANDLING & STORAGE

Precautions for safe handling: Handle empty containers with care - residue can burn if heated. Empty containers should be thoroughly rinsed with copious amounts of clean water. The rinse water can be used for makeup water for any necessary dilution of the concentrated product before use, or it can be properly discarded. See section 8 for recommendations on the use of personal protective equipment. Keep container closed when not in use.

Conditions for safe storage, incl. any incompatibilities: Keep container tightly closed when not in use. Protect from moisture. Store away from heat. Material can attack some forms of plastics. Do not store together with oxidizing and self-igniting products. Keep away from heat and incompatible materials (see section 10 for incompatibilities). Recommended storage materials: Carbon/Mild steel with epoxy-phenolic internal coating, or stainless steel.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Propane-1,2-diol	150 ppm	Total Vapor & Particulates	TWA
	474 mg/m^3	Total Vapor & Particulates	TWA
	10 mg/m^3	Particulates	TWA
	168 mg/m^3	End Use: Workers Routes of	DN(M)EL

	Exposure	
10 mg/m^3	End Use: Workers Routes of Exposure	DN(M)EL
50 mg/m^3	End Use: General Population Routes of Exposure	DN(M)EL
10 mg/m^3	End Use: General Population Routes of Exposure	DN(M)EL
260 mg/L	Fresh Water Value (Assessment factor: 50)	PNEC
26 mg/L	Sea Water Value (Assessment factor: 500)	PNEC
183 mg/L	Water Value, Intermittent Releases (Assessment factor: 100)	PNEC
572 mg/kg dw	Fresh Water Sediment	PNEC
57.2 mg/kg dw	Sea Sediment Value	PNEC
50 mg/kg dw	Soil Sediment	PNEC
20000 mg/L	Sewage Treatment Plant Value (Assessment factor: 1)	PNEC
1133 mg/kg	Oral Value (Assessment factor: 30)	PNEC

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection:

Eyes: Goggles recommended during handling.

Inhalation: If ventilation is insufficient, suitable respiratory protection must be provided.

Body: Wear protective clothing. Wear appropriate protective gloves. The glove material has to be impermeable and resistant to the product. Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other: Use good personal hygiene practices. Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear colorless liquid	**Vapor Pressure:**	20 Pa @ 25 °C
Odor:	No data available	**Vapor Density:**	No data available
Odor Threshold:	No data available	**Evaporation Rate:**	No data available
Color:	No data available	**Flammability:**	No data available
Molecular Weight:	No data available	**Upper/lower Explosive Limit:**	No data available
pH:	No data available	**Flash Point:**	104°C (220°F)
Boiling Point:	185-188°C	**Specific Gravity:**	No data available
Melting Point:	< -20 °C	**Solubility in Water:**	Fully miscible with water in all proportions
Relative Density:	1.038 @ 20/20 °C 1.036 @ 25/25 °C	**Auto-Ignition Temperature:**	327-337°C (620.6-638.6°F)
Partition Coefficient: n-octanol/water:	Pow: 0.0851 at 20.5°C log Pow: -1.07 at 20.5°C	**Decomposition Temperature:**	No data available
Viscosity, Dynamic:	43.428 mPa.s at 298.15 K 24.247 mPa.s at 308.15 K 12.78 mPa.s at 318.15 K 9.691 mPa.s at 328.15 K 7.044 mPa.s at 338.15 K	**Explosive Properties:**	Not explosive
Oxidizing Properties:	Not considered oxidizing	**Freezing Point:**	No data available

10 STABILITY AND REACTIVITY

Reactivity:	Stable under recommended storage conditions.
Chemical Stability:	Stable under recommended storage conditions.
Hazardous Polymerization:	Not expected to occur. Note: This material is stable when properly handled and stored.
Conditions to Avoid:	High temperatures, oxidizing conditions. May degrade when exposed to light or other radiation sources.
Incompatible Materials:	Reacts with strong oxidizing agents. Strong acids. Isocyanates.
Hazardous Decomposition Products:	Carbon monoxide and other toxic vapors.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data available
Skin:	Non-irritating to the skin.
Eyes:	Non-irritating to the eyes.
Respiratory:	No data available
Ingestion:	No data available
Carcinogenicity:	Long term toxicity studies conducted in rodents and dogs demonstrate that this substance is not a carcinogen.
Teratogenicity:	No toxicity to development.
Germ Cell Mutagenicity:	Negative for genotoxicity using both in vitro and in vivo tests.
Embryotoxicity:	No data available
Specific Target Organ Toxicity:	No data available
Reproductive Toxicity:	No toxicity to reproduction.
Respiratory/Skin Sensitization:	No data available
Corrosivity:	Non-irritating to the skin.
Sensitization:	Not sensitizing.
Irritation:	No data available
Repeated Dose Toxicity:	High aerosol concentrations inhaled caused minor nasal and ocular signs that may have been due to mild irritation or drying effects on mucous membranes. Long-term studies conducted with high oral doses found no evidence of adverse effects.

12 ECOLOGICAL INFORMATION

Ecotoxicity	
Aquatic Vertebrate:	LC50: 40,613 mg/L (96h) (*Oncorhynchus mykiss*) Not expected to exhibit chronic toxicity to fish.
Aquatic Invertebrate:	EC50: 18,340 mg/L (48h) (*Ceriodaphnia dubia*) NOEC: 13,020 mg/L (7d) (*Ceriodaphnia dubia*)
Terrestrial:	EC50: 19,000 mg/L (96h) (*Pseudokirchneriella subcapita*) NOEC: 20,000 mg/L (18h) (*Pseudomonas putida*)
Persistence and Degradability:	Readily biodegradable in aerobic conditions. There is evidence that it is degraded under anaerobic conditions label.
Bioaccumulative Potential:	Bioconcentration factor (BCF): 0.09 Remarks: This material is not expected to bioaccumulate.
Mobility in Soil:	Soil Surface tension: 71.6 mN/m @ 21.5 °C (Aqueous solution). Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation. This material is not expected to persist in the environment and should pose little if any physical or toxicological hazards.
PBT and vPvB Assessment:	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
Other Adverse Effects:	This material is expected to be non-hazardous to aquatic species.

13 DISPOSAL CONSIDERATIONS

Waste Residues:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Consult and comply with local, provincial and federal regulations that may apply.
Product Containers:	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product container.

The information in section 13 is for the product as shipped. Use and/or alterations to the product may change the characteristics of

the material and alter the waste classification and proper disposal methods

14 TRANSPORT INFORMATION

DOT (Dept. of Transportation, USA):	No data available
TDG (Transportation of Dangerous Goods, Canada):	No data available
IMDG (International Maritime Dangerous Goods):	The substance is not subject to international regulations on transport of dangerous goods.
IATA (International Air Transport Association):	The substance is not subject to international regulations on transport of dangerous goods.
ICAO (International Civil Aviation Organization):	The substance is not subject to international regulations on transport of dangerous goods.
ADR/RID/ADN:	The substance is not subject to international regulations on transport of dangerous goods.

15 REGULATORY INFORMATION

TSCA Inventory Status:	All ingredients are listed or exempt from the inventory.
DSCL (EEC):	No data available
WHMIS (Canada):	No data available
DSL (Canada):	All ingredients are listed or exempt from the inventory.
EU EINECS/ELINCS/NLP:	All ingredients are listed or exempt from the inventory.
China IECSC:	All ingredients are listed or exempt from the inventory.
China IECIC (06.30.2014):	No data available
Australia AICS:	All ingredients are listed or exempt from the inventory.
Japan ENCS:	No data available
Philippines PICCS:	All ingredients are listed or exempt from the inventory.
Korea KECI:	All ingredients are listed or exempt from the inventory.
New Zealand NZIoC:	All ingredients are listed or exempt from the inventory.
REACH Registration No.:	01-2119456809-23-0014

16 OTHER INFORMATION

Revision Date:	27-Sep-2021
Compliance:	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200
Disclaimer:	This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitableness & completeness of such information for his own particular use.