



## Material Safety Data Sheet

Creation Date 19-Nov-2009

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Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	<b>Propylene Glycol</b>
<b>Cat No.</b>	<b>P355-1; P355-4; P355-20; P355-200; S801501</b>
<b>Synonyms</b>	1,2-Propanediol; 1,2-Dihydroxypropane; Methyl Glycol (USP/FCC)
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b> Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	<b>Emergency Telephone Number</b> CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### **WARNING!**

#### **Emergency Overview**

Irritating to eyes and skin. May cause an allergic skin reaction. May cause irritation of respiratory tract. May cause central nervous system effects. Hygroscopic.

**Appearance** Clear

**Physical State** viscous liquid

**Odor** odorless

**Target Organs** Skin, Eyes, Central nervous system (CNS), Blood, Kidney, spleen

#### **Potential Health Effects**

##### **Acute Effects**

##### **Principle Routes of Exposure**

##### **Eyes**

Irritating to eyes.

##### **Skin**

Irritating to skin. May produce an allergic reaction. May be harmful in contact with skin.

##### **Inhalation**

May cause irritation of respiratory tract. May be harmful if inhaled.

##### **Ingestion**

May be harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

##### **Chronic Effects**

Tumorigenic effects have been reported in experimental animals.. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse kidney effects. Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Haz/Non-haz**

Component	CAS-No	Weight %
1,2-Propylene glycol	57-55-6	99

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	99°C / 210.2°F
<b>Method</b>	No information available.
<b>Autoignition Temperature</b>	400°C / 752°F
<b>Explosion Limits</b>	
Upper	12.6 vol %
Lower	2.6 vol %
<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable Extinguishing Media</b>	No information available.
<b>Hazardous Combustion Products</b>	No information available.
<b>Sensitivity to mechanical impact</b>	No information available.
<b>Sensitivity to static discharge</b>	No information available.

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**                      **Health** 0                      **Flammability** 1                      **Instability** 0                      **Physical hazards** N/A

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
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### Exposure Guidelines

Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EL
1,2-Propylene glycol			TWA: 10 mg/m <sup>3</sup> TWA: 155 mg/m <sup>3</sup> TWA: 50 ppm

**NIOSH IDLH:** Immediately Dangerous to Life or Health

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	viscous liquid
<b>Appearance</b>	Clear
<b>Odor</b>	odorless
<b>Odor Threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Vapor Pressure</b>	0.13 mbar @ 20 °C
<b>Vapor Density</b>	2.62 (Air = 1.0)
<b>Viscosity</b>	45 mPa s at 20 °C
<b>Boiling Point/Range</b>	187°C / 368.6°F
<b>Melting Point/Range</b>	-60°C / -76°F
<b>Decomposition temperature °C</b>	No information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Flash Point	99°C / 210.2°F
Evaporation Rate	No information available.
Specific Gravity	1.030
Solubility	Soluble in water
log Pow	No data available
Molecular Weight	76.10
Molecular Formula	C3 H8 O2

**10. STABILITY AND REACTIVITY**

Stability	Hygroscopic.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Strong oxidizing agents, Acids
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing.

**11. TOXICOLOGICAL INFORMATION****Acute Toxicity****Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,2-Propylene glycol	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	Not listed

**Irritation** Irritating to eyes and skin

**Toxicologically Synergistic Products** No information available.

**Chronic Toxicity**

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization** May cause sensitization by skin contact

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** No information available.

**Teratogenicity** Teratogenic effects have occurred in experimental animals..

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

**Endocrine Disruptor Information** No information available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,2-Propylene glycol	EC50 96 h 19000 mg/L	Not listed	= 710 mg/L EC50 Photobacterium phosphoreum 30 min	EC50 48 h >10000 mg/L

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
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## 15. REGULATORY INFORMATION

1,2-Propylene glycol	X	X	-	200-338-0	-		X	X	X	X	KE-29267 X
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## Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

## SARA 313

Not applicable

## SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

## Clean Water Act

Not applicable

## Clean Air Act

Not applicable

## OSHA

Not applicable

## CERCLA

Not Applicable

## California Proposition 65

This product does not contain any Proposition 65 chemicals.

## State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1,2-Propylene glycol	-	X	X	-	X

## U.S. Department of Transportation

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** Slight risk, Grade 1

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

Non-controlled

**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
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**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**