

SAFETY DATA SHEET

Creation Date 19-Nov-2009

Revision Date 19-Dec-2025

Revision Number 9

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name 1,2-Propanediol

Cat No. : AC220870000; AC220870010; AC220870025; AC220870250;
AC220872500

CAS No 57-55-6
Synonyms Propylene glycol

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is not considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

This product is not considered hazardous by the US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200).

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|----------------------|---------|----------|
| 1,2-Propylene glycol | 57-55-6 | <=100 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur. |
| Inhalation | Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration. |
| Ingestion | Do NOT induce vomiting. Get medical attention immediately if symptoms occur. |
| Most important symptoms and effects | No information available. |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 99 °C / 210.2 °F |
| Method - | No information available |
| Autoignition Temperature | 400 °C / 752 °F |
| Explosion Limits | |
| Upper | 12.6 vol % |
| Lower | 2.6 vol % |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | 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.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

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
2

Flammability
1

Instability
1

Physical hazards
N/A

6. Accidental release measures

Personal Precautions

Use personal protective equipment as required. Ensure adequate ventilation.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Handling

Ensure adequate ventilation. Wear personal protective equipment/face protection.

Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Acids.

8. Exposure controls / personal protection

Exposure Guidelines

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

Recommended Filter type:

Particle filter.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State

Viscous liquid Liquid

Color

Clear Colourless

Odor

Odorless

Odor Threshold

No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> | <u>• Method</u> |
|---|---|----------------|--|
| Melting Point/Range | -60 °C / -76 °F | | |
| Softening Point | No data available | | |
| Boiling Point/Range | 187 °C / 368.6 °F | | |
| Flash Point | 99 °C / 210.2 °F | | |
| Flammability (liquid) | No data available | | Method - No information available |
| Flammability (solid,gas) | Not applicable | Liquid | |
| Explosion Limits | Lower 2.5 vol % Upper 12.6 vol % | | |
| Autoignition Temperature | 400 °C / 752 °F | | |
| Decomposition Temperature | No data available | | |
| pH | 6.5-7.5 | 100g/l aq. sol | |
| Viscosity | 45 mPa.s at 20 °C | | |
| Water Solubility | Completely soluble | | |
| Solubility in other solvents | No information available | | |
| Partition Coefficient (n-octanol/water) | | | |
| Component | log Pow | | |
| 1,2-Propylene glycol | -0.9 | | |
| Vapor Pressure | 0.13 mbar @ 20 °C | | |
| Density / Specific Gravity | 1.03 - 1.04 | | |
| Bulk Density | Not applicable | Liquid | |
| Vapor Density | 2.62 | (Air = 1.0) | |
| Particle characteristics | Not applicable (liquid) | | |
| Other Information | | | |
| Molecular Formula | C3 H8 O2 | | |
| Molecular Weight | 76.10 | | |
| Evaporation Rate | No information available | | |

10. Stability and reactivity

| | |
|----------------------------------|---|
| Reactive Hazard | None known, based on information available |
| 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 ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Information on expected route of exposure

| | |
|------------|--|
| 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. |
| Eyes | Irritating to eyes. |
| Skin | Irritating to skin. May produce an allergic reaction. May be harmful in contact with skin. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------------|------------------------|-------------------------------|-----------------|
| 1,2-Propylene glycol | LD50 = 20 g/kg (Rat) | LD50 = 20800 mg/kg (Rabbit) | - |

| | | |
|--|--|--|
| | | |
|--|--|--|

- Toxicologically Synergistic Products** No information available
- (b) skin corrosion/irritation;** Based on available data, the classification criteria are not met
- (c) serious eye damage/irritation;** Based on available data, the classification criteria are not met
- (d) respiratory or skin sensitization;**
Respiratory Based on available data, the classification criteria are not met
Skin Based on available data, the classification criteria are not met
- (e) germ cell mutagenicity;** Based on available data, the classification criteria are not met
- (f) carcinogenicity;** Based on available data, the classification criteria are not met
 The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|----------------------|---------|------------|------------|------------|------------|------------|
| 1,2-Propylene glycol | 57-55-6 | Not listed | Not listed | Not listed | Not listed | Not listed |

- (g) reproductive toxicity;** Based on available data, the classification criteria are not met
- (h) STOT-single exposure;** Based on available data, the classification criteria are not met
- (i) STOT-repeated exposure;** Based on available data, the classification criteria are not met
Target Organs None known.
- (j) aspiration hazard;** Based on available data, the classification criteria are not met
- Symptoms / effects,both acute and delayed** No information available.
- Other Adverse Effects** The toxicological properties have not been fully investigated.
- Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|----------------------|---|---|---|---|
| 1,2-Propylene glycol | EC50: = 19000 mg/L, 96h (Pseudokirchneriella subcapitata) | LC50: = 51600 mg/L, 96h static (Oncorhynchus mykiss) LC50: 41 - 47 mL/L, 96h static (Oncorhynchus mykiss) LC50: = 51400 mg/L, 96h static (Pimephales promelas) LC50: = 710 mg/L, 96h | = 710 mg/L EC50 Photobacterium phosphoreum 30 min | EC50: > 1000 mg/L, 48h Static (Daphnia magna) |

| | | | | |
|--|--|-----------------------|--|--|
| | | (Pimephales promelas) | | |
|--|--|-----------------------|--|--|

Persistence and Degradability Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|----------------------|---------|
| 1,2-Propylene glycol | -0.9 |

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

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|----------------------|---------|------|---|-----------------------------|
| 1,2-Propylene glycol | 57-55-6 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|----------------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| 1,2-Propylene glycol | 57-55-6 | X | - | 200-338-0 | X | X | X | X | X | KE-29267 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| 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

Authorisation/Restrictions according to EU REACH Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------------|---------|---|---|---|
| 1,2-Propylene glycol | 57-55-6 | - | - | - |

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------------|---------|----------|------------------------------|---------------------------|--|
| 1,2-Propylene glycol | 57-55-6 | Listed | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------|---------|---|--|----------------------------|------------------------------------|
| 1,2-Propylene glycol | 57-55-6 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

| | |
|-------------------------|---|
| Prepared By | Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com |
| Creation Date | 19-Nov-2009 |
| Revision Date | 19-Dec-2025 |
| Print Date | 19-Dec-2025 |
| Revision Summary | Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024. |

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS