

SILVER FERN CHEMICAL



Safety Data Sheet

PROPYLENE GLYCOL Industrial

SECTION 1: IDENTIFICATION

Product Name: PROPYLENE GLYCOL USP

CAS Number: 57-55-6

Chemical Name: 1,2-Propanediol

Synonyms: Propylene Glycol, 1,2-Propanediol, 1,2-Dihydroxypropane, Monopropylene Glycol

Uses: Solvent, Intermediate, Functional Fluids

Company

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SECTION 2: HAZARD IDENTIFICATION

Signal Word: Not Applicable

Hazard Statements:

Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Content (W/W)	Ingredients
57-55-6	>= 99.0%	Propylene Glycol



SECTION 4: FIRST AID MEASURES

First aid procedures

General advice:

May cause irritation of the eyes, skin and mucous membranes. Always observe self-protection methods Move out of dangerous area. Remove contaminated shoes and clothing. Show this material safety data sheet to the doctor in attendance.

If inhaled:

Remove to fresh air. In the case of inhalation of aerosol/mist consult a physician if necessary. Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Avoid inhalation of hot vapors or extremely high concentrations of aerosols.

In case of skin contact:

Wash skin thoroughly with mild soap and water.

In case of eye contact:

Flush eyes with water thoroughly and continuously for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, consult a specialist.

If swallowed:

Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

Notes to physician

Symptoms:

High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

Hazards:

This product is of low acute toxicity. May cause irritation of the eyes, skin and mucous membranes. Hot vapors may cause lung damage.

Treatment:

Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Flammable properties

Flash point:	219 °F (104 °C) at 1000.010 hPa (750.071 mm Hg)
Autoignition temperature:	> 752 °F (400 °C) at 1000.10 - 1014.40 hPa (750.14 - 760.86 mm Hg)
Lower explosion limit:	~2.4 vol%
Upper explosion limit:	~17.4 vol%

Fire fighting

Suitable extinguishing media: SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam.
LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable extinguishing media: Do not use solid water stream.

Protective equipment and precautions for firefighters

Specific hazards during firefighting: 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. 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.
Although water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.
Refer to NFPA Code 13 for guidance in using propylene glycol in sprinkler system applications.

Special protective equipment for fire-fighters: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighter's protective clothing will only provide limited protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Environmental precautions: Try to prevent the material from entering drains or water courses.

Methods for containment: Extinguish ignition sources; stop release; prevent flow to sewers or public waters

Methods for cleaning up: 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

SECTION 7: HANDLING AND STORAGE

Handling

Advice on 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.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers:

Handle empty containers with care - residue may be combustible.

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.

Advice on common storage:

Carbon/Mild steel with suitable internal coating, or stainless steel

Other data:

No decomposition if stored and applied as directed.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Consult local authorities for acceptable exposure limits.

Exposure controls

Engineering measures

No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.

Personal protective equipment

Respiratory protection:

No special respiratory protection equipment is recommended under anticipated conditions of normal use.

Hand protection:

Not normally considered a skin hazard.
Use chemical resistant gloves appropriate to conditions of use.
Wear chemical resistant gloves such as: Nitrile rubber and latex

Eye and face protection:

Use splash goggles when eye contact due to splashing or spraying liquid is possible.

Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of anticipated use.
Where use can result in skin contact, practice good personal hygiene.

Hygiene measures:

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential expo

Wash hands before eating, drinking, smoking, or using toilet facilities.
Take off contaminated clothing and wash before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Liquid at 68 °F (20 °C) (1,013.25 hPa (760.00 mm Hg))
Color: Clear, colorless
Odor: Little or no odor

Safety data

Flash point: 219 °F (104 °C) at 1000.010 hPa (750.071 mm Hg)
Lower explosion limit: ~2.4 vol%
Upper explosion limit: ~17.4 vol%
Flammability (solid, gas): Not applicable
Oxidizing properties: The substance or mixture is not classified as oxidizing.
Auto-ignition temperature: > 752 °F (400 °C) at 1000.10 - 1014.40 hPa (750.14 - 760.86 mm Hg)
Decomposition temperature: Not determined
pH: No data available
Melting point/range: < -4 °F (-20 °C)
Boiling point/boiling range: 363 °F (184 °C) at 1003.20 hPa (752.46 mm Hg)
Vapor pressure: 0.2 hPa (0.2 mm Hg) at 77 °F (25 °C)
Density: 1.03 g/cm³ at 68 °F (20 °C)
Water solubility: at 68 °F (20 °C) Miscible in water.
Partition coefficient: n-octanol/water: Log Pow: -1.07 at 68.9 °F (20.5 °C)
Viscosity, kinematic: 42.1 mm²/s at 77 °F (25 °C)
Relative vapor density: no data available
Surface tension: 71.6 mN/m 1.01g/l at 70.7 °F (21.5 °C)
Explosive properties: Not explosive

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage conditions.

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: High temperatures, oxidizing conditions. May degrade when exposed to light or other radiation sources

Materials to avoid: Reacts with strong oxidizing agents. Strong acids. Isocyanates

Hazardous decomposition products: Carbon Monoxide and other toxic vapors

Thermal decomposition: Incomplete combustion may produce carbon monoxide and other toxic gases.

Hazardous reactions: Not expected to occur
This material is stable when properly handled and stored

SECTION 11: TOXICOLOGICAL INFORMATION

Product Summary: The below given information is based on the assessment of the product including impurities.

Acute toxicity

Acute oral toxicity: Based on acute toxicity values, not classified.

LD50 Oral: > 5,000 mg/kg

Species: Rat

Acute inhalation toxicity: Based on acute toxicity values, not classified.

LC50 (Inhl): > 20 mg/l

Exposure time: 4 HOURS

Species: Rabbit

Acute dermal toxicity: Based on acute toxicity values, not classified

LD50 Dermal: > 2,000 mg/kg

Species: Rabbit

Skin corrosion/irritation: Based on skin irritation values, not classified

May cause slight transient skin irritation

Serious eye damage/eye irritation: Based on eye irritation values, not classified. May produce minimal, fully reversible eye irritation

Respiratory or skin sensitization: Respiratory sensitization

Not classified no data available

Skin sensitization Not classified Skin reactions of unknown etiology have been described in some hypersensitive individuals following topical application.

Chronic toxicity

Carcinogenicity: Not classified No adverse effect observed.

Germ cell mutagenicity: Not classified No adverse effect observed.

Reproductive toxicity

Effects on fertility: Not classified

Effects on or via lactation: No adverse effect observed

Effects on Development: Not classified. No adverse effect observed.

Target Organ Systemic Toxicant - Single exposure: Based on single exposure toxicity values, not classified.

Target Organ Systemic Toxicant - Repeated exposure: Based on repeated exposure toxicity values, not classified., Propylene glycol is of low inherent toxicity in rats and dogs after repeated oral exposure, while cats show species-specific hematological changes in red blood cells (other tissues unremarkable). Rats exposed repeatedly to high aerosol concentrations exhibited signs consistent with irritation of the eyes and nasal mucosa but showed no evidence of systemic toxicity.

Aspiration hazard: Based on physico-chemical values or lack of human evidence

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicology Assessment

Acute aquatic toxicity: Based on acute aquatic toxicity values, not classified.

Chronic aquatic toxicity: Not classified, based on readily biodegradability and low acute toxicity.

Toxicity to fish: Low acute toxicity to fish

Toxicity to daphnia and other aquatic invertebrates Low acute toxicity to aquatic invertebrates

Toxicity to algae: Low toxicity to algae.

Toxicity to bacteria: Low toxicity to sewage microbes.

Toxicity to fish (Chronic toxicity): No study available.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) Low chronic toxicity to aquatic invertebrates

Persistence and degradability

Biodegradability; Rapidly degradable
72 - 100 %
(After 28 days in a ready biodegradability test)

Bioaccumulative potential

Bioaccumulation: This material is not expected to bioaccumulate

Mobility in soil

Surface tension: 71.6 mN/m
1.01g/l at 21.5 °C

Distribution among: Stability in soil

Environmental compartments: Low potential for soil adsorption expected

Stability in water

Hydrolytically stable

Molecular structure includes no hydrolysable functional groups.

Additional advice Environmental fate and pathways: No additional information available

Results of PBT and vPvB assessment

Not applicable

Other adverse effects

Additional ecological information: No additional information available

SECTION 13: DISPOSAL CONSIDERATIONS

Further information: Comply with federal, state, or local regulations for disposal. Landfill solids at permitted sites. Burn concentrated liquids, diluting with clean, low viscosity fuel. Avoid flameouts and assure that emissions comply with all applicable standards/regulations. Dilute aqueous waste may biodegrade. Assure effluent complies with applicable regulations

SECTION 14: TRANSPORT INFORMATION

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

SECTION 15. REGULATORY INFORMATION

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312

Based upon available information, this material is not classified as a health and/or physical hazard according to Section 311 & 312.

SARA 313

This product contains no known chemicals regulated under SARA 313.

This product contains the following chemicals regulated by New Jersey's Worker and Community Right to Know Act:

57-55-6

Propylene Glycol

No components are subject to the Massachusetts Right to Know Act.

This product contains the following chemicals regulated by Pennsylvania's Right to Know Act:

57-55-6

Propylene Glycol

Other international regulations

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
Unites States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

SECTION 16: OTHER INFORMATION

HMIS Classification:

Health Hazard: 0

Flammability: 1

Physical hazards: 0

NFPA Classification:

Health Hazard: 0

Fire Hazard: 1

Instability: 0

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