Version: 1.2

Revision date: 22.01.2024

Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: Identification

Product identifier

Trade name/designation:	Propylene glycol U.S.P. - F.C.C.
Product No.:	9402
Synonyms:	none

Relevant identified uses of the substance or mixture and uses advised against

Recommended use	For Laboratory, Research or Manufacturing Use.
Uses advised against	Not determined.

Details of the supplier of the safety data sheet

Supplier

Avantor Performance Materials, LLC.

Street	100 Matsonford Rd, Suite 200
Postal code/City	Radnor, PA 19087, United States
Telephone	+1-855-282-6867
Telefax	+1-610-573-2610

Emergency phone number

Telephone	+1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA and Canada)

Preparation Information
Product Information Compliance

E-mail	SDS@avantorsciences.com

SECTION 2: Hazard identification

Classification of the substance or mixture

This substance is classified as not hazardous according to regulation 29 CFR 1910.1200 (OSHA HCS).

Label elements

According to regulation 29 CFR 1910.1200 (OSHA HCS) the product does not have to be labelled.

Hazard(s) not otherwise classified (HNOC)
none

SECTION 3: Composition/information on ingredients

Substances

Substance name:	Propylene glycol
Molecular formula:	$CH_3CH(OH)CH_2OH$
Molecular weight:	76.1 g/mol
CAS No.:	57-55-6

SECTION 4: First aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. Obtain medical attention if symptoms appear.

In case of skin contact

Gently wash with plenty of soap and water. In case of skin reactions, consult a physician.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Obtain medical attention if symptoms appear.

In case of ingestion

Rinse mouth thoroughly with water. Call a doctor if you feel unwell.

Most important symptoms/effects, acute and delayed

No known symptoms to date.

Indication of any immediate medical attention and special treatment needed

No special information on medical attention and special treatment available.

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.
Water.
Foam.
Dry extinguishing powder.

Extinguishing media which must not be used for safety reasons

Full water jet.

Specific hazards arising from the chemical

In case of fire may be liberated:
Carbon monoxide
Carbon dioxide (CO2).

Advice for firefighters

Combustible substance.
Do not inhale explosion and combustion gases.
The vapor is heavier than air and may travel along the ground; distant ignition possible.
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms.

Environmental precautions

No special environmental measures are necessary.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Dispose according to legislation.

Additional information

Personal protection equipment (PPE): see section 8 Disposal information: see section 13

SECTION 7: Handling and storage

Precautions for safe handling

Advices on safe handling
No special measures are necessary.
Measures to prevent fire, aerosol and dust generation
No special measures are necessary.
Measures required to protect the environment
No special measures are necessary.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Ambient temperature
Storage: Store in a dry place. Store in a closed container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Packaging materials: Glass High density polyethylene (HDPE) Unsuitable materials and coatings of containers/equipment: No further relevant information available.

SECTION 8: Exposure controls/personal protection

Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

Engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact	
Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time	30-60 min

By long-term hand contact	
Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time	> 480 min

Respiratory protection
Usually no personal respirative protection necessary.

Additional information
Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls
no data available

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odor:	no data available
(c) Odor threshold:	no data available

Safety relevant basic data

(d) pH:	6-8 (100 g/l; H2O; 20 °C)
(e) Melting point/freezing point:	-59 °C
(f) Initial boiling point and boiling range:	187.6 °C (1013 hPa)
(g) Flash point:	99 °C
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	2.4 % (v/v)
Upper explosion limit:	17.4 % (v/v)
(k) Vapor pressure:	0.11 hPa (20 °C)
(l) Vapor density:	~2.6 (20 °C)
(m) Density:	1.04 g/cm³ (20 °C)
(n) Solubility(ies)	
Water solubility:	soluble (20 °C)
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	-0.92 (20 °C)
(p) Auto-ignition temperature:	371 °C
(q) Decomposition temperature:	Not applicable
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	45 mPa*s (20 °C)
(s) Explosive properties:	Not applicable
(t) Oxidising properties:	Not applicable

Other information

Bulk density:	no data available
Refraction index:	1.4324 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

Reactivity

This material is non-reactive under normal conditions.
In case of warming:
Risk of ignition.
Vapor may form explosive mixtures with air.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Violent reaction with:
Oxidising agent.
Reducing agent.
Peroxides

Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).
Avoid high temperatures or direct sunlight.

Incompatible materials:

Rubber articles
Plastic articles

Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

Information on toxicological effects

Acute effects

Acute oral toxicity:
LD50: < 19400 mg/kg - Rat - (Merck KGaA)

Acute dermal toxicity:
LD50: > 20800 mg/kg - Rabbit - (Merck KGaA)

Acute inhalation toxicity:
no data available

Irritant and corrosive effects:

Primary irritation to the skin:
Not applicable

Irritation to eyes:
Not applicable

Irritation to respiratory tract:
Not applicable

Respiratory or skin sensitization

In case of skin contact: not sensitizing
In case of inhalation: not sensitizing

STOT-single exposure

Not applicable

STOT-repeated exposure

Not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
No indication of human carcinogenicity.

Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
Not applicable

Other adverse effects
no data available

SECTION 12: Ecological information

Ecotoxicity

Fish toxicity:
LC50: 710 - 55800 mg/l (96 h) - Cornell, J.S., D.A. Pillard, and M.T. Hernandez 2000. Comparative Measures of the Toxicity of Component Chemicals in Aircraft Deicing Fluid. Environ.Toxicol.Chem. 19(6):1465-1472

Daphnia toxicity:
LC50: 1020 - 18300 mg/l (48 h) - Cornell, J.S., D.A. Pillard, and M.T. Hernandez 2000. Comparative Measures of the Toxicity of Component Chemicals in Aircraft Deicing Fluid. Environ.Toxicol.Chem. 19(6):1465-1472

Algae toxicity:
no data available

Bacteria toxicity:
no data available

Persistence and degradability
no data available

Bioaccumulative potential
Partition coefficient: n-octanol/water: -0.92 (20 °C)

Mobility in soil:
no data available

Other adverse effects
no data available

SECTION 13: Disposal considerations

Waste treatment methods

Appropriate disposal / Product
Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

Appropriate disposal / Package
Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (DOT)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	not assigned
Transport hazard class(es):	none
Packing group:	not assigned
Environmental hazards**:**	none
Special precautions for user:	none

Sea transport (IMDG)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	not assigned
Transport hazard class(es):	none
Packing group:	not assigned
Environmental hazards**:**	none
Special precautions for user:	none
Maritime transport in bulk according to IMO instruments:	not relevant

Air transport (ICAO-TI / IATA-DGR)

UN number or ID number:	No dangerous good in sense of this transport regulation.
UN proper shipping name:	not assigned
Transport hazard class(es):	none
Packing group:	not assigned
Special precautions for user:	none

SECTION 15: Regulatory information

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

National regulations

Toxic Substances Control Act (TSCA)
Listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 313 Components

Not listed.

US State Regulations

Massachusetts Right To Know Components

Not listed.

Pennsylvania Right To Know Components

Listed

New Jersey Right To Know Components

Listed

California Prop. 65 Components

Not listed.

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygiensts
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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22.01.2024	1.2	2024-01-22

Additional information

Indication of changes:	general update If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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