



TCI AMERICA

SAFETY DATA SHEET

Revision number: 2
Revision date: 10/06/2014

1. IDENTIFICATION

Product name: 1,2-Propanediol
Product code: P0485

Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

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TCI America
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2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Eye Damage/Irritation [Category 2B]

Signal word: Warning!

Hazard Statement(s): Causes eye irritation

Pictogram(s) or Symbol(s): None

Precautionary Statement(s):

[Prevention]
[Response]

Wash hands and face thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

[Storage]
[Disposal]

None
None

Hazards not otherwise classified: [HNOC] Causes mild skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance
Components: 1,2-Propanediol
Percent: >99.0%(GC)
CAS Number: 57-55-6
Molecular Weight: 76.10
Chemical Formula: C₃H₈O₂
Synonyms: 1,2-Dihydroxypropane , Propylene Glycol

4. FIRST-AID MEASURES

Inhalation:

Call a poison center or doctor if you feel unwell. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

4. FIRST-AID MEASURES

Skin contact:	If skin irritation occurs get medical advice/attention. Remove and wash contaminated clothing before re-use. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Eye contact:	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Contact with material may irritate or burn eyes. Call emergency medical service. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Ingestion:	Do not induce vomiting without medical advice. If swallowed, seek medical advice immediately and show the container or label. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Symptoms/effects:	
Acute:	No data available
Delayed:	No data available
Immediate medical attention:	If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, CO₂, sand, earth, water spray or regular foam Consult with local fire authorities before attempting large scale fire fighting operations.

Specific hazards arising from the chemical

Hazardous combustion products: These products include: Carbon oxides

Other specific hazards: Closed containers may explode from heat of a fire.

Special precautions for fire-fighters:

Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material. Containers may explode when heated. Move containers from fire area if you can do it without risk.

Special protective equipment for fire-fighters:

Wear positive pressure self-contained breathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Personal protective equipment:	Wear eye protection (splash goggles) and face protection (full length face shield). Lab coat. Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile).
Emergency procedures:	In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed.

Methods and materials for containment and cleaning up:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

7. HANDLING AND STORAGE

Precautions for safe handling:	Do NOT breathe gas, fumes, vapor, or spray. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition.
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7. HANDLING AND STORAGE

Conditions for safe storage:	Keep only in the original container in a cool well-ventilated place. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods.
Storage incompatibilities:	Store away from oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No data available

Appropriate engineering controls:

Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal protective equipment

Respiratory protection:	Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
Hand protection:	Nitrile gloves.
Eye protection:	Wear eye protection (splash goggles) and face protection (full length face shield).
Skin and body protection:	Lab coat.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Liquid	pH:	No data available
Form:	Clear	Vapor pressure:	10.6Pa/20°C
Color:	Colorless - Almost colorless	Vapor density:	No data available
Odor:	No data available	Dynamic Viscosity:	19.9mPa·s (40°C)
Odor threshold:	No data available	Evaporation rate:	No data available (Butyl Acetate = 1)
Melting point/freezing point:	-59°C (-74°F)	Autoignition temperature:	371°C (700°F)
Boiling point/range:	188°C (370°F)	Flammability or explosive limits:	
Decomposition temperature:	No data available	Lower:	2.6%
Relative density:	1.04	Upper:	12.6%
Kinematic Viscosity:	20mm ² /s (40°C)		
Partition coefficient:	-0.92		
n-octanol/water (log P_{ow})			
Flash point:	107°C (225°F)		
Flammability (solid, gas):	No data available		
Solubility(ies):			
Water:	Miscible		
Miscible:	Acetone, Chloroform		
Soluble:	Ether, Benzene		

10. STABILITY AND REACTIVITY

Reactivity:	Not Available.
Chemical Stability:	Hygroscopic.
Possibility of Hazardous Reactions:	No hazardous reactivity has been reported.
Conditions to avoid:	Avoid excessive heat and light.
Incompatible materials:	Oxidizing agents
Hazardous Decomposition Products:	No data available

11. TOXICOLOGICAL INFORMATION

RTECS Number: TY2000000

Acute Toxicity:

orl-rat LD50:20 g/kg

skn-rbt LD50:20800 mg/kg

ipr-rat LD50:6660 mg/kg

Skin corrosion/irritation:

skn-hmn 104 mg/3D-I MOD

skn-hmn 500 mg/7D MLD

Serious eye damage/irritation:

eye-rbt 100 mg MLD

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

cyt-mus-scu 8000 mg/kg

dni-mus-scu 8000 mg/kg

Carcinogenicity:

No data available

IARC: No data available**NTP:** No data available**OSHA:** No data available**Reproductive toxicity:**

ipr-mus TDLo:100 mg/kg(15D preg)

Routes of Exposure:

Inhalation, Eye contact, Ingestion, Skin contact.

Symptoms related to exposure:

Eye contact may result in redness or pain. Skin contact may result in redness, pain or dry skin.

Potential Health Effects:

Skin and eye contact may result in irritation.

Target organ(s):

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Fish:**96h LC50:>100 mg/L (*Oryzias latipes*)**Crustacea:**48h EC50:>1000 mg/L (*Daphnia magna*)**Algae:**72h EC50:>1000 mg/L (*Selenastrum capricornutum*)**Persistence and degradability:**

90 % (by BOD), 99 % (by TOC), 99 % (by GC)

Bioaccumulative potential (BCF):

3

Mobility in soil:

No data available

Partition coefficient:

-0.92

n-octanol/water (log P_{ow})**Soil adsorption (K_{oc}):**

1

Henry's Law:1.3 x 10⁻³**constant (PaM³/mol)****13. DISPOSAL CONSIDERATIONS****Disposal of product:**

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

Disposal of container:

Dispose of as unused product. Do not re-use empty containers.

Other considerations:

Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION**DOT (US)**

Non-hazardous for transportation.

IATA

Non-hazardous for transportation.

14. TRANSPORT INFORMATION**IMDG** Non-hazardous for transportation.**15. REGULATORY INFORMATION****Toxic Substance Control Act (TSCA 8b.):**

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations**CERCLA Hazardous substance and Reportable Quantity:****SARA 313:** Not Listed**SARA 302:** Not Listed**State Regulations****State Right-to-Know****Massachusetts** Not Listed**New Jersey** Listed**Pennsylvania** Not Listed**California Proposition 65:** Not Listed**Other Information****NFPA Rating:****Health:** 0**Flammability:** 1**Instability:** 0**HMIS Classification:****Health:** 0**Flammability:** 1**Physical:** 0**International Inventories****WHMIS hazard class:** No data available.**EC-No:** 200-338-0**16. OTHER INFORMATION****Revision date:** 10/06/2014**Revision number:** 2

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.