

MATERIAL SAFETY DATA SHEET - MSDS

Efficacious Ingredients * Hygienically Stored & Processed * Convenient Deliveries

Product Name: 1,3 Propanediol

INCI: Propanediol

SECTION 1: GENERAL INFORMATION AND CHEMICAL PRODUCT IDENTIFICATION

Chemical Name CAS # %

CAS Number: 504-63-2

Cas Name: 1,3-Propanediol

Material: 1,3-Propanediol CAS Number: 504-63-2 > 99.7%

Formula: C₃H₈O₂

Molecular Weight: 76.09

SECTION 2: HAZARD IDENTIFICATION

Potential Health Effects

Propanediol is highly hydroscopic and may cause skin irritation in its pure form. A 75% solution of propanediol did not cause dermal irritation in a human skin patch test.

No adverse effects are expected from incidental eye contact with 1,3- Propanediol.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

SECTION 3: FIRST AID MEASURES

First Aid

General Information

Not expected to be a health hazard when used under normal conditions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT: Flush skin with water after contact. Wash contaminated clothing before reuse.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

No antidote or specific regimens known. Use supportive measures as needed.

SECTION 4: EXPLOSION AND FIRE-FIGHTING MEASURES

Flammable Properties

Flash Point: 131 C (268 F)

Method: Cleveland Open Cup - COC.

This material will burn. It is not an explosion hazard.

Extinguishing Media

Water, Foam, Dry Chemical, CO2, Water Spray.

Fire Fighting Instructions

Exposure to decomposition products may be a hazard to health.

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire.

Wear self-contained breathing apparatus.

Avoid breathing vapor. Use water spray to knock down vapor.

SECTION 5: ACCIDENTAL RELEASE/SPILL PROCEDURES

Safeguards (Personnel)

NOTE: Review firefighting measures sections and personal protection section before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material.

Accidental Release Measures

Ventilate area and wash spill site after material pickup is complete.

SECTION 6: HANDLING AND STORAGE

Handling

Avoid breathing vapors or mist. Avoid contact with eyes, skin or clothing.

Wash thoroughly after handling. Avoid prolonged or repeated exposure.

Storage

Keep container tightly closed. Keep away from heat, sparks and flames. Store in a cool, dry place.

SECTION 7: PERSONAL PROTECTION

Engineering Controls

Keep container tightly closed. Keep away from heat and open flame. Store in a cool dry place.

Protection levels and types of controls will vary depending on potential exposure conditions. Adequate ventilation should be provided to control airborne concentrations. Input from the data sheet should be used as input to a risk assessment of local conditions to help determine appropriate controls for safe handling, storage and disposal of this material.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses with side shields.

RESPIRATOR

Where there is potential for airborne exposure, wear appropriate NIOSH approved respiratory protection.

PROTECTIVE CLOTHING

Where there is potential for skin contact have available, and wear as appropriate, impervious gloves, apron, pants, and jacket.

Exposure Guidelines

Exposure Limits

Propanediol

AEL * : 5 mg/m³, 8 & 12 Hr. TWA

* AEL is Propanediol's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 8: PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point: 214 C (417 F)

Melting Point: -24 C (-11 F)

Vapor Pressure: 0.08 mm Hg @ 20 C (68 F)
9.8 mm Hg @ 100 C (212 F)

Solubility in Water: Miscible with water

pH: Neutral

Color: Colorless

Form: Liquid

Specific Gravity: 1.053

Evaporation Rate: <1 (Butyl Acetate=1.0)

SECTION 9: STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

Incompatible or can react with strong oxidizers, strong acids.

Decomposition

Hazardous decomposition products are not expected to form during normal storage.

Polymerization

Polymerization is not expected to occur under normal storage conditions.

SECTION 10: TOXICOLOGICAL INFORMATION

Animal Data

Basis for Assessment

Information given is based on test data for a similar product.

1,3-Propanediol Oral LD50: 15,000 mg/kg in

rats Dermal LD50: > 20,000 mg/kg in rabbits

Inhalation 4 hour ALC: > 5.0 mg/L in rats

1,3-Propanediol is not an eye irritant, is a slight skin irritant, and is not a skin sensitizer.

Repeated exposure of rats by oral gavage caused no toxicologically important changes in clinical pathology, pathology (including sperm analyses), or in-life measurements. The NOEL for this study was 1000 mg/kg/day, the highest dose tested.

Repeated inhalation exposure in rats caused no toxicologically important changes in clinical pathology, pathology, or in-life measurements. The NOEL was 1800 mg/m³.

Animal data show that 1,3-Propanediol is not uniquely toxic to the fetus. Information about reproductive toxicity potential is limited to information from the oral repeated dose study in rats. The absence of effects to sperm and reproductive organs in an oral repeat-dose study in rats suggests low reproductive toxicity potential.

1,3-Propanediol is not likely to be a genetic toxin. In vitro, it was not mutagenic in bacterial or mammalian cells. An increase in chromosome aberrations was observed in mammalian cells under certain conditions, but a repeat study with 1,3-propanediol was negative for all test conditions.

1,3-Propanediol was also negative in the in vivo mouse micronucleus assay.

No animal data are available to define the carcinogenic potential of 1,3 Propanediol.

Human Data

Basis for Assessment

Information given is based on test data on 1,3 Propanediol.

1,3 Propanediol was not a dermal irritant or sensitizer at test concentrations as high as 75% in a 207-person human skin patch test.

SECTION 11: ECOLOGICAL INFORMATION

Ecotoxicological Information

Basis for assessment

Information given is based on test data for a similar product.

AQUATIC TOXICITY:

Low toxicity.

48-hour EC50 - Daphnia magna: 7417 mg/L

72-hour EC50 - algae: 1600 mg/L

96-hour LC50 - fathead minnow: >9720 mg/l

Mobility: dissolves in water

Persistence/degradability: readily biodegradable

Bioaccumulation: low potential to bioaccumulate

SECTION 12: DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

SECTION 13: TRANSPORT INFORMATION

Not classified as hazardous.

SECTION 14: REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: Listed.

SECTION 15: OTHER INFORMATION

DISCLAIMER

Technical information and suggestions for use including any formulations and / or procedures are believed to be correct. However, this does not constitute a guarantee of the accuracy of the information contained herein and confirming tests in your own laboratory or facility are recommended. This information is for general research purposes only and is not a representation or warranty of any kind. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use. The information contained in this certificate of analysis and material safety data sheet are obtained from current and reliable sources. As the use(s) of this product is outside the control of skin foodie, no representation or warranty, expressed or implied is made as to the effect(s) of such use(s) (including damage or injury), or the results obtained.

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