

SAFETY DATA SHEET

1,3-Butylene glycol

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: 1,3- Butanediol; beta-Butylene glycol
Other means of identification: CAS No. 107-88-0
EINECS No: 203-529-7

Recommended use of the chemical and restrictions on use:

General reagent use.

Supplier Details:

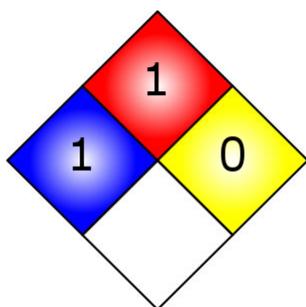
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CCN17213

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Emergency Contact: CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)

2. HAZARDS IDENTIFICATION

NFPA



Signal Word:
WARNING!

Other hazards which do not result in classification:

Potential Health Effects:

**Product Information: 203.740.3471 Emergency Assistance (CHEMTREC): 1.800.424.9300 (USA)
+1.703.527.3887 (INT)**

Organ	Description
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	1,3-Butylene glycol
Common name / Synonym:	1,3-Butanediol; beta-Butylene glycol
CAS number:	107-88-0
EINECS number:	203-529-7
ICSC number:	1182
RTECS #:	EK0440000

% Weight	Material	CAS
99.5	1,3-Butylene glycol	107-88-0

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

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Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties

Classification

OSHA/NFPA Class IIIB Flammable Liquid.

Flash point

121°C (250°F) - closed cup

Autoignition temperature

395°C (743°F)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Do not inhale vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.

7. HANDLING AND STORAGE

Precautions for safe handling:

Use proper personal protective equipment when handling material to prevent contact with skin and eyes. Do not inhale vapor or mist.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
1,3-Butylene Glycol	/		No exposure limit	

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless, clear liquid
Odor	Odorless
pH	6-7
Initial boiling point and boiling range	204 °C (399 °F)
Flash point	121 °C (250 °F) - closed cup
Evaporation rate	Specific data not available - expected to be rapid.
Vapor pressure	0.08 hPa (0.06 mmHg) at 20 °C (68 °F)
Vapor Density	3.11
Relative Density	1.005 g/cm ³ at 25 °C (77 °F)
Solubility(ies)	Slightly soluble
Partition coefficient n-octanol/water(ies)	No Data Available.
Auto-ignition temperature	395 °C (743 °F)

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10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid (e.g., static discharge, shock or vibration)	Avoid moisture, heat flames, and sparks. Avoid extreme temperatures and direct sunlight.
Incompatible materials	Strong oxidizing agents, Acid chlorides, Acid anhydrides, Chloroformates, Reducing agents
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

- 1,3-Butylene Glycol 107-88-0

Product Summary:

Laboratory tests have shown some reproductive effects. No data available for the mutagenic or teratogenic effects of the product.

Acute Toxicity:

LD50 (Dermal)	Rabbit	20,000 mg/kg	
LD50 (Oral)	Rat	18,610 mg/kg	

Irritation:

Eyes

Rabbit - mild eye irritation - 24 hours

Skin

Rabbit - Severe skin irritation - 24 hours

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards

Organ	Description
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Ingestion	May be harmful if ingested.
Inhalation	May be harmful if inhaled. May be irritating to the respiratory tract.
Skin	May be harmful if absorbed through skin. May be irritating to the skin.

12. ECOLOGICAL INFORMATION

- 1,3-Butylene Glycol 107-88-0

Ecotoxicity (aquatic and terrestrial, where available):

Toxicity to Aquatic Plants (1,3-BUTYLENE GLYCOL)

EC50 / 72 hours Green Algae - 1,070 mg/L

Persistence and degradability:

This product is not readily biodegradable.

Bioaccumulative potential:

No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Offer surplus and non-recyclable solutions to a licensed disposal company.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	Not a dangerous good.
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IMDG

UN-Number: Not a dangerous good.

Marine pollutant: No

IATA

UN-Number: Not a dangerous good.

15. REGULATORY INFORMATION

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Safety, health and environmental regulations specific for the product in question:

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right To Know Components

1,3-Butylene glycol CAS No. 107-88-0

Pennsylvania Right To Know Components

1,3-Butylene glycol CAS No. 107-88-0

New Jersey Right To Know Components

1,3-Butylene glycol CAS No. 107-88-0

California Prop 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION: INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer

PHARMCO-AAPER believes that the information on this SDS was obtained from reliable sources. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, PHARMCO-AAPER does not assume responsibility and expressly disclaims liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable. Information is correct to the best of our knowledge at the date of the SDS publication.