



**Neutron<sup>®</sup> Pharmachemical Co.**  
Manufacturer of Laboratory Chemical & Pharmaceutical Materials

# SAFETY DATA SHEET

**Creation Date** 19-Aug-2010

**Revision Date** 16-Sep-2025

**Revision Number** 6

## 1. Identification

**Product Name** 1,3-Butanediol

**Cat No. :** 6.3010

**CAS No** 107-88-0

**Synonyms** 1,3-Butylene glycol

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

NEUTRON PHARMACHEMICAL CO

11, 3th Floor, Borjsaz Building, Azadi Ave, Tehran, Iran.

T-021-66906732-3 F-021-66581408

[www.neutronco.com](http://www.neutronco.com) [info@neutronco.com](mailto:info@neutronco.com)

**Emergency Telephone Number**

125

## 2. Hazard(s) identification

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

### Label Elements

#### **Hazard Statements**

#### **Precautionary Statements**

#### **Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
1,3-Butanediol	107-88-0	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
<b>Inhalation</b>	Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	109 °C / 228.2 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	375 °C / 707 °F
<b>Explosion Limits</b>	
<b>Upper</b>	12.6 vol %
<b>Lower</b>	1.9 vol %
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

Health  
1

Flammability  
1

Instability  
1

Physical hazards  
N/A

### 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.
<b>Environmental Precautions</b>	Avoid release to the environment. See Section 12 for additional Ecological Information.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and Storage

<b>Handling</b>	Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.
<b>Storage.</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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<b>Engineering Measures</b>	None under normal use conditions.
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### Personal Protective Equipment

<b>Eye/face Protection</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	No protective equipment is needed under normal use conditions.
<b>Recommended Filter type:</b>	Particle filter.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	6.0-7.0
<b>Melting Point/Range</b>	< -54 °C / -65.2 °F
<b>Softening Point</b>	No data available
<b>Boiling Point/Range</b>	203 - 204 °C / 397.4 - 399.2 °F
<b>Flash Point</b>	109 °C / 228.2 °F
<b>Flammability (liquid)</b>	No data available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Explosion Limits</b>	<b>Lower</b> 1.9 Vol% <b>Upper</b> 12.6 Vol%
<b>Autoignition Temperature</b>	375 °C / 707 °F
<b>Decomposition Temperature</b>	No data available
<b>Water Solubility</b>	Soluble
<b>Solubility in other solvents</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	

**Method -** No information available

Liquid

<b>Component</b>	<b>log Pow</b>	
1,3-Butanediol	-0.29	
<b>Vapor Pressure</b>	0.08 mbar @ 20 °C	
<b>Density / Specific Gravity</b>	1.010	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Vapor Density</b>	3.1	(Air = 1.0)
<b>Viscosity</b>	24.6 cSt at 50 °C	
<b>Particle characteristics</b>	Not applicable (liquid)	
<b>Molecular Formula</b>	C4 H10 O2	
<b>Molecular Weight</b>	90.12	

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Hygroscopic.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Exposure to moist air or water.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Eyes</b>	Mild eye irritation.
<b>Skin</b>	May cause irritation.

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,3-Butanediol	LD50 = 18610 mg/kg ( Rat )	Not listed	LC50 > 60 ppm ( Rat ) 8 h

<b>Toxicologically Synergistic Products</b>	No information available
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	No information available
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
1,3-Butanediol	107-88-0	Not listed	Not listed	Not listed	Not listed	Not listed

<b>Mutagenic Effects</b>	No information available
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<b>Reproductive Effects</b>	No information available.
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<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	None known
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	No information available
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

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Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,3-Butanediol	EC50: 1.070 mg/L/72H	Leuciscus Idus: >2000 mg/L/48H	Not listed	Not listed

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
1,3-Butanediol	-0.29

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

## 15. Regulatory Information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
1,3-Butanediol	107-88-0	X	ACTIVE	-

#### **Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

TSCA 12(b) - Notices of Export

Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
1,3-Butanediol	107-88-0	X	-	203-529-7	X	X	X	X	X	KE-03787

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations** Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** Slight risk, Grade 1

**Authorisation/Restrictions according to EU REACH**

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances	REACH (1907/2006) - Annex XVII - Restrictions	REACH Regulation (EC 1907/2006) article 59 -
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		Subject to Authorization	on Certain Dangerous Substances	Candidate List of Substances of Very High Concern (SVHC)
1,3-Butanediol	107-88-0	-	-	-

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
1,3-Butanediol	107-88-0	Listed	Not applicable	Not applicable	Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
1,3-Butanediol	107-88-0	Not applicable	Not applicable	Not applicable	Not applicable

**16. Other Information**

**Creation Date** 19-Aug-2010  
**Revision Date** 16-Sep-2025  
**Print Date** 16-Sep-2025  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**