

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product name:	Diethylene glycol monobutyl ether
Synonyms:	Butyl diglycol, Diethylene glycol monobutyl ether, Butyl carbitol, 2-(2-Butoxyethoxy)ethanol, Dioxitol
Cat. No.:	D50-4
CAS No.:	112-34-5
EC No.:	203-961-6

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

Identified uses:	Laboratory chemicals, manufacture of substances.
Uses advised against:	No uses advised against.

1.3 Details of the supplier of the SDS

Manufacturer:	Hefei TNJ Chemical Industry Co.,Ltd.
Address:	D1508 Xincheng Center, Qianshan Road, Zhengwu District, Hefei, Anhui 230022 China
E-mail:	sales@tnjchem.com
Telephone:	+ 86 551 65418684
Fax:	+ 86 551 65418697

1.4 Emergency telephone number


In China: + 86 551 65418684 (Monday to Friday, 8:30a.m. to 5:30p.m., Beijing Time)

Section 2: Hazards identification**2.1 Classification of the substance or mixture**

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)
- Serious Eye Damage/Eye Irritation Category 2
- Specific target organ toxicity - (repeated exposure) Category 2

- Target Organs - Kidney, Liver.

2.2 GHS Label elements, including precautionary statements

Hazard pictogram(s):	
Signal word:	Warning
Hazard Statements:	Causes serious eye irritation May cause damage to organs through prolonged or repeated exposure

2.3 Other hazards

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling

Wear eye/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Response

Get medical attention/advice if you feel unwell

Eyes

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/attention

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

Section 3: Composition/information on ingredients

3.1 Component information

Ingredients	CAS No.	EC No.	Content (%)
Diethylene glycol monobutyl ether	112-34-5	203-961-6	> 95

Section 4: First aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Inhalation	Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.

Ingestion Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects No information available.

Notes to Physician Treat symptomatically

Section 5: Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Unsuitable Extinguishing Media No information available

Flash Point 100 °C / 212 °F

Method - CC (closed cup) ISO 2719

Autoignition Temperature 227 °C / 440.6 °F

Explosion Limits

Upper 5.30 vol %

Lower 0.70 vol %

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge 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 (CO₂).

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	Flammability	Instability	Physical hazards
2	1	0	N/A

Section 6: Accidental release measures

Personal Precautions Use personal protective equipment as required. Remove all sources of ignition. Avoid contact with skin, eyes or clothing.

Environmental Precautions Avoid release to the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Remove all sources of ignition. Soak up with inert absorbent material. Keep unsuitable, closed containers for disposal.

Section 7: Handling and storage

Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Metals. Strong acids. Strong bases. Peroxides.

Section 8 : Exposure controls/personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Diethylene glycol monobutyl ether	TWA: 10 ppm			

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Personal Protective Equipment

Eye/face Protection 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 EN 166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Organic gases and vapours filter. Type A. Brown.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Section 9: Physical and chemical properties

Appearance

Physical State	Liquid
Color	Colorless
Odor	Slight
Odor Threshold	No information available

Property

Values

Melting Point/Range	-68 °C / -90.4 °F
Softening Point	No data available
Boiling Point/Range	231 °C / 447.8 °F @ 760 mmHg
Flash Point	100 °C / 212 °F Method - CC (closed cup) ISO2719
Flammability (liquid)	No data available
Flammability (solid,gas)	Not applicable Liquid
Explosion Limits	Lower 0.7 vol % Upper 5.3 vol %
Autoignition Temperature	227 - °C / 440.6 - °F
Decomposition Temperature	No data available
pH	No information available
Viscosity	6.16 mPa.s @ 20 °C
Water Solubility	Soluble
Solubility in other solvents	No information available
Partition Coefficient (n-octanol/water)	
Component	log Pow
Diethylene glycol monobutyl ether	0.56
Vapor Pressure	130 mmHg @ 30°C
Density / Specific Gravity	0.955
Bulk Density	Not applicable Liquid

Vapor Density	5.6 (Air = 1.0)
Particle characteristics	Not applicable (liquid)
Other Information	
Molecular Formula	C8 H18 O3
Molecular Weight	162.23
Explosive Properties	Not explosive explosive air/vapour mixtures possible

Section 10: Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents, Metals, Strong acids, Strong bases, Peroxides
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO2)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	May form explosive peroxides

Section 11: Toxicological information

Information on expected route of exposure

Inhalation May cause irritation of respiratory tract. May be harmful if inhaled. INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.

Ingestion May be harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Eyes Irritating to eyes.

Skin May cause irritation. May be harmful in contact with skin.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol monobutyl ether	LD50 = 5660 mg/kg (Rat)	LD50 = 2700 mg/kg (Rabbit)	-

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory: Based on available data, the classification criteria are not met;

Skin: Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Diethylene glycol monobutyl ether	112-34-5	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects, both acute and delayed No information available.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

Section 12: Ecological information

Ecotoxicity

Component	Diethylene glycol monobutyl ether
Freshwater Algae	EC50: > 100 mg/L, 96h (Desmodesmus subspicatus)
Freshwater Fish	LC50: = 1300 mg/L, 96h static (Lepomis macrochirus)
Microtox	Not listed
Water Flea	EC50: > 100 mg/L, 48h(Daphnia magna)

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility. Component log Pow Diethylene glycol monobutyl ether 0.56

Section 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.

Section 14: Transport information

UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packaging group

ADR/RID: - IMDG: - IATA: -

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user No data available

Further information Not classified as dangerous in the meaning of transport regulations.

Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

Section 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : 2-(2-butoxyethoxy)ethanol

Chemical safety assessment

For this product a chemical safety assessment was not carried out

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds %
Diethylene glycol monobutyl ether	12-34-5	>95	1.0	-

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.

Section 16: Other information

Full text of H-Statements H319 Causes serious eye irritation.

Declare to reader

The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.