

Safety Data Sheet

According to GB/T 16483-2008 and GB/T 17519-2013

Propylene glycol n-butyl(monobutyl) ether

Version 1.0

Issue date: 09/07/2021

Revision date: 09/07/2021

SDS Record Number: CSSS-TCO-010-129373

Section 1 Chemical Product and Company Identification

Chemical name: Propylene glycol n-butyl(monobutyl) ether

Additional identification: PNB

Product code: Not available

Identification of the product: CAS# 5131-66-8 EC# 225-878-4

Relevant identified uses of the substance and uses advised against

Identified uses: Used as solvents.

Uses advised against: Not available

Details of the supplier of the safety data sheet

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Section 2 Hazards Identification

Emergency Overview: Colorless liquid with ethereal odor. Combustible liquid. During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

GHS Classification:

Physical hazards Flammable liquids Category 4

Health hazards Acute toxicity, oral Category 5

Skin corrosion/irritation Category 2

Eye damage/irritation Category 2A

Environmental hazards Not classified

Label elements

Pictogram:



Signal Word(s): Warning

Hazard Statement: Combustible liquid

May be harmful if swallowed

Causes skin irritation

Causes serious eye irritation

Precautionary statement

Prevention: Keep away from flames and hot surfaces. No smoking.

Wash hands thoroughly after handling.

Wear protective gloves/eye protection/face protection

Response: IF ON SKIN: Wash with plenty water/...

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a POISON CENTER/doctor/if you feel unwell.

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Storage:	If skin irritation occurs: Get medical advice/attention.
Disposal:	If eye irritation persists: Get medical advice/attention.
Physical and chemical hazards:	Take off contaminated clothing and wash it before reuse.
	In case of fire: Use water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam to extinguish.
	Store in a well-ventilated place. Keep cool.
	Dispose of contents/container in accordance with local regulation.
	Combustible liquid. During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
Health Hazards:	May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
Environmental hazards:	The product has no obvious harm to the water environment.
Other hazards:	This product has not been found to have other hazards which are outside the scope of GB30000.2-29.

Section 3 Composition Information on Ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	CAS No.	Concentration or concentration range (w/w %)
propylene glycol n-butyl(monobutyl) ether	5131-66-8	≥99%

Section 4 First Aid Measures

In case of inhalation:	Move person to fresh air; if effects occur, consult a physician.
In case of skin contact:	Wash thoroughly with soap and water.
In case of eyes contact:	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
In case of ingestion:	If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Most important symptoms and effects, both acute and delayed:	May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
To protect playing rescuer advice and the special hints to the doctor:	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

Section 5 Fire-fighting Measures

Extinguishing agent

Suitable extinguishing media:	Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog or fine spray. Dry chemical fire extinguishers.
Unsuitable extinguishing media:	Do not use direct water stream. May spread fire.

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Special hazards arising from the chemical: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Special fire fighting methods and special protective actions for fire-fighters: Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Small spills: Absorb with materials such as: Sand. Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers.

Precautions to prevent the occurrence of secondary hazards: Dispose of the collected spill immediately to avoid further leaks or sewers.

Section 7 Handling and Storage

Safe handling

Local and general ventilation: Operations should be carried out in a place with partial ventilation or full ventilation.

Safety instructions: Operators should follow the procedure and use the personal protective equipment recommended by the SDS section 8.

Precautions: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Normal measures for preventive fire protection.

Storage

Suitable storage conditions: Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents. Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters. This product will absorb water if exposed to air. For fixed site operations, this product and other propylene glycol ethers with flash points at or below 60 °C (140 °F) should be stored under nitrogen blanketing.

Incompatible materials: Strong acids. Strong bases. Strong oxidizers.

Safe packaging materials: Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper.

Section 8 Exposure Controls / Personal Protection

Occupational exposure limits: According to GBZ2.1, the OELs of components are not established.

Biological limits: No standard has been established.

Engineering controls: Ensure adequate ventilation. The workplace shall have safe place to shower, clean eyes and body, and place for safe care.

Personal protection equipment

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should

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Hand protection:

be needed; however, if discomfort is experienced, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C)

Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended.

Eye protection:

Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin and body protection:

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hygiene measures:

Avoid contact with eyes. Wash hands after handling. Do not eat and drink in the workplace.

Section 9 Physical and Chemical Properties

Appearance:	Colorless liquid
Odor:	Etheral odor
Odor threshold:	Not applicable
Molecular formula:	C ₇ H ₁₆ O ₂
Molecular weight:	132.2
Melting point/freezing point (°C):	< -85 °C
Boiling point, initial boiling point (°C):	171 °C
Density:	0.88 g/cm ³ , 20°C
Relative density(H ₂ O=1):	0.88, 20°C
Vapor pressure (25°C) (kPa):	1.05 mm Hg
Partition coefficient (n-octanol/water):	log Pow=1.2 , 20°C
Solubility in water:	52 g/L, 20 °C
Solubility in organic solvents:	No data available
Flash point (°C):	62.5 °C
Auto-ignition temperature (°C):	260 °C
Flammability limit - lower (%):	No data available
Flammability limit - upper (%):	No data available
Decomposition temperature (°C):	No data available
Flammability (solid, gas):	No data available
Explosive properties	No data available
Explosive limit - lower (%):	No data available
Explosive limit - upper (%):	No data available
pH value:	No data available
Viscosity (mPa · S):	3.85 mm ² /s , 25.0°C
Relative vapor density (air=1):	No data available
Relative evaporation rate (n-butyl acetate=1):	No data available

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Section 10 Stability and Reactivity

Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
Conditions to avoid:	Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.
Incompatible materials:	Strong acids. Strong bases. Strong oxidizers.
Hazardous decomposition products:	Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids. Carbon dioxide.

Section 11 Toxicological Information

Acute toxicity:	
LD50(Oral, Rat):	3300 mg/kg bw
LD50(Dermal, Rat):	>2 000 mg/kg bw
LC50(Inhalation, Rat, 4h):	No data available
Skin corrosion/Irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

Section 12 Ecological Information

Ecotoxicity	
LC50 (Fish, 96h)	> 560 - < 1000 mg/L
EC50 (Daphnia, 48h)	> 1000 mg/L
EC50 (Algae, 96h):	> 1000 mg/L
Persistence and degradability:	Readily biodegradable
Bioaccumulative potential:	No data available
Mobility in soil:	No data available

Section 13 Disposal Considerations

Residual waste	Recycling as much as possible. If recycling is not possible, use incineration methods for disposal. Do not dispose of this product by means of discharge to the sewer.
Contaminated packaging	Empty containers or pads may retain some product residue, so beware of label warnings even when empty containers. These materials and their containers must be disposed of in a safe manner. Empty containers should be returned to the manufacturer or sent to a national / local approved waste disposal site.
Disposal considerations:	Waste disposal should refer to the relevant national and local laws and regulations, the waste chemicals for recycling, or packed in sealed containers, to a special waste

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disposal sites.

Section 14 Transport Information

UN Number: Not regulated

UN Proper shipping name: Not regulated

Transport hazard Class: Not regulated

Packaging group: Not regulated

Marine pollutant (yes/no): No

Transport special precautions:

—Grounding chains should be equipped with tank or car during transportation, hole plate can be set in the tank to prevent static electricity generated by shaking;

—Exhaust pipe of the vehicle which transports this product shall be equipped with fireproofing equipment, Do not handle with the machinery or tools which may produce spark easily;

—Do not package or transport with oxidant, food chemicals or others;

—Prevent from sunlight exposure, rain and heat during transportation, in summer, best to transport in the morning or evening;

—Keep away from fire, heat source and high temperature when stops on the way;

—Follow the route as prescribed during highway transportation, do not stay in residential areas and densely populated area;

—Prohibit humping in railway transportation;

—Transport vehicles should be equipped with corresponding fire equipment and spill contingency processing equipment.

Section 15 Regulatory Information

The following laws, regulations, rules and standards, provide corresponding provisions of the management of chemicals:

Name	Relevant Inventories	Listed Or Not
Measures On Safety Management Of Hazardous Chemicals	Inventory Of Hazardous Chemicals	Not listed
	The First Batch Of Key Regulatory List Of Hazardous Chemicals	Not listed
Measures On New Substance Environmental Management	The Inventory Of Existing Chemical Substance In China	Listed
Provisions On Environmental Management Of First Import And Export Of Toxic Chemicals	China Strictly Restricted List Of Import And Export Of Toxic Chemicals	Not listed

Section 16 Other Information

Indication of changes:

Version 1.0 Amended by GB/T16483 and GB/T 17519.

Abbreviations:

CAS: Chemical Abstracts Service

LC50: Lethal Concentration 50

EC50: Concentration for 50% of maximal effect

LD50: Lethal dose 50%

PC-TWA: time-weighted average allowable concentration, average allowable concentration in 8h working day, 40h work week.

PC-STEL: Short-Term Exposure Tolerance, the concentration allowed to be exposed in short-term (15 minutes).

IARC: International Agency for Research on Cancer

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ACGIH: US Government Conference of Industrial Hygienists

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Dangerous Goods

EINECS: European Inventory of Existing commercial Chemical Substances

IATA: International Air Transport Association

ICAO-TI: International Civil Aviation Organization The International Civil Aviation Covenant

Disclaimer:

The information in this Safety Data Sheet (SDS) applies only to the products specified and does not apply to mixtures containing this product with other substances, unless otherwise specified. This Safety Data Sheet (SDS) is based on information currently available in all its aspects and will not be held responsible for its long-term timeliness. This Safety Data Sheet (SDS) provides information about the safety of the product for the intended purpose only to appropriately trained personnel operating the product. Users of this SDS must make independent judgments on the suitability of this SDS for special conditions of use. Under special conditions of use, the SDS author will not be responsible for the damage caused by the use of this Safety Data Sheet (SDS). Each user of the product should read carefully the contents of this Safety Data Sheet (SDS) before proceeding. For more information to ensure correct evaluation, please contact the product supplier.

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