SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.1
Creation Date: July 15, 2019
Revision Date: April 18, 2024

SECTION 1: Identification

1.1 GHS Product identifier

Product name Benzyl alcohol

1.2 Other means of identification

Product number 100-51-6
Other names Benzyl alcohol; Benzenemethanol

1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.
Uses advised against no data available

1.4 Supplier's details

Company Zhongshan Greenrock Technology Co., Ltd.
Address Jinsan Avenue, Sanjiao Town, Zhongshan City, Guangdong Province, China
Telephone +86-2087066781

1.5 Emergency phone number

Emergency phone number +86-2087066781
Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral
Acute toxicity - Category 4, Inhalation

2.2 GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning
Hazard statement(s) H302 Harmful if swallowed
H332 Harmful if inhaled
Precautionary statement(s)
Prevention P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
Response P301+P317 IF SWALLOWED: Get medical help.
P330 Rinse mouth.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P317 Get medical help.
Storage none
Disposal P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

Inhalation of vapor may cause irritation of upper respiratory tract. Prolonged or excessive inhalation may result in headache, nausea, vomiting, and diarrhea. In severe cases, respiratory stimulation followed by respiratory and muscular paralysis, convulsions, narcosis and death may result. Ingestion may produce severe irritation of the gastrointestinal tract, followed by nausea, vomiting, cramps and diarrhea; tissue ulceration may result. Contact with eyes causes local irritation. Material can be absorbed through skin with anesthetic or irritant effect. (USCG, 1999)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Enhancement of elimination: Hemodialysis may enhance the elimination of benzyl alcohol and its metabolites and may also be useful to help correct severe metabolic acidosis. However, more cases involve prolonged repeated infusion, and the usefulness of dialysis in unknown.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Foam, carbon dioxide, dry chem ...

5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Use powder, AFFF, foam, carbon dioxide.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

6.2 Environmental precautions

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

6.3 Methods and materials for containment and cleaning up

SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a POTW is acceptable only after review by the governing authority. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must meet Hazardous Material Criteria for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants.Benzyl alcohol is stored in stainless steel tanks. Because benzyl alcohol oxidizes readily, it is advisable to cover the surface of the liquid with nitrogen.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

MAK: 22 mg/m3, 5 ppm; peak limitation category: I(2); skin absorption (H); pregnancy risk group: C

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid. Liquid.
Colour	Not reported.
Odour	Faint aromatic odor
Melting point/freezing point	-15.4 °C.
Boiling point or initial boiling point and boiling range	205.31 °C. Atm. press.:1 atm.
Flammability	Combustible.
Lower and upper explosion limit/flammability limit	no data available
Flash point	100.4 °C.
Auto-ignition temperature	436 °C. Remarks:Pressure not stated.
Decomposition temperature	no data available
pH	A solution in water is neutral to litmus
Kinematic viscosity	dynamic viscosity (in mPa s) = 5.05. Temperature:25.0°C.
Solubility	10 to 50 mg/mL at 70° F (NTP, 1992)
Partition coefficient n-octanol/water	log Pow = 1. Temperature:20 °C. Remarks:No pH-value was stated.;log Pow = 1.1. Temperature:20 °C. Remarks:No pH-value was stated.;log Pow = 1.1. Temperature:25 °C. Remarks:No pH-value was stated.
Vapour pressure	7 Pa. Temperature:20 °C.;12 Pa. Temperature:25 °C.;17 Pa. Temperature:30 °C.
Density and/or relative density	1.04 g/cm³. Temperature:24 °C.
Relative vapour density	3.7 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts with strong oxidants. Attacks some forms of plastic. On combustion, forms toxic gases including carbon monoxide.

10.2 Chemical stability

Oxidizes slowly, therefore remains stable for long time

10.3 Possibility of hazardous reactions

Slight, when exposed to heat or flame ...Attacks plastics. [Handling Chemicals Safely 1980. p. 236]. Acetyl bromide reacts violently with alcohols or water [Merck 11th ed. 1989]. Mixtures of alcohols with concentrated sulfuric acid and strong hydrogen peroxide can cause explosions. Example: an explosion will occur if dimethylbenzylcarbinol is added to 90% hydrogen peroxide then acidified with concentrated sulfuric acid. Mixtures of ethyl alcohol with concentrated hydrogen peroxide form powerful explosives. Mixtures of hydrogen peroxide and 1-phenyl-2-methyl propyl alcohol tend to explode if acidified with 70% sulfuric acid [Chem. Eng. News 45(43):73 1967; J, Org. Chem. 28:1893 1963]. Alkyl hypochlorites are violently explosive. They are readily obtained by reacting hypochlorous acid and alcohols either in aqueous solution or mixed aqueous-carbon tetrachloride solutions. Chlorine plus alcohols would similarly yield alkyl

hypochlorites. They decompose in the cold and explode on exposure to sunlight or heat. Tertiary hypochlorites are less unstable than secondary or primary hypochlorites [NFPA 491 M 1991]. Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence [Wischmeyer 1969].

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Mixtures with sulfuric acid decompose expliosively at 180 deg C.

10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and fumes.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 - rat (male) - 1.55 mL/kg bw. Remarks:Corresponding to 1620 mg/kg bw (density: 1.045 g/mL).
- Inhalation: LC50 - rat (male/female) - > 4 178 mg/m³ air.
- Dermal: LD50 - guinea pig - < 5 000 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The aerosol is irritating to the eyes and skin. The substance may cause effects on the nervous system.

STOT-repeated exposure

Repeated or prolonged contact may cause skin sensitization.

Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 - Pimephales promelas - 460 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 230 mg/L - 48 h.
- Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 770 mg/L - 72 h.
- Toxicity to microorganisms: IC50 - Aerobic heterotrophs and Nitrosomonas - 2 100 mg/L - 49 h. Remarks:Respiration rate.

12.2 Persistence and degradability

AEROBIC: Benzyl alcohol underwent 70% of theoretical biological oxygen demand in 5 days under aerobic conditions using an acclimated mixed microbial culture(1). At an initial concentration of 250 ppm, benzyl alcohol achieved 29% of the theoretical BOD after 12 hours in a sewage sludge acclimated to this compound, and 31% oxidation in a sludge acclimated to mandelic acid(2). At an initial concentration of 500 ppm, it achieved 52%, 42%, and 43% of the theoretical BOD in 12 hours using a settled sewage sludge acclimated to phenol, benzoic acid, and catechol, respectively(2). It is listed as a synthetic organic chemical easily biodegradable by biological sewage treatment(3). Benzyl alcohol at an initial concentration of 500 mg/L was shown to undergo rapid oxygen uptake under aerobic conditions when inoculated with municipal sewage sludge(4,5). Benzyl alcohol achieved 48% of the theoretical BOD in 5 days using a sewage sludge seed(6). Benzyl alcohol underwent 60.8% degradation using an industrial sludge inoculum under aerobic conditions in 5 days(7). Benzyl alcohol, present at 100 mg/L, reached 94% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(8). An experimentally-derived first-order aerobic biodegradation rate constant of 0.05 days was reported(9), corresponding to a half-life of about 13 days(SRC).

12.3 Bioaccumulative potential

An estimated BCF of 1.4 was calculated in fish for benzyl alcohol(SRC), using a log Kow of 1.10(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

12.4 Mobility in soil

Experimental Koc values for benzyl alcohol were <5 for three different soils; Apison (0.11% organic carbon), Fullerton (0.06% organic carbon), and Dormont (1.2% organic carbon)(1). An experimental Koc of 15 was determined for benzyl alcohol on a red-brown Australian soil (1.09% organic carbon)(2,3). A log Koc of 1.43 has also been reported(4). According to a classification scheme(5), these Koc values suggest that benzyl alcohol is expected to have very high mobility in soil.

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

SECTION 16: Other information

Information on revision

Creation Date	July 15, 2019
Revision Date	April 18, 2024

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Any questions regarding this SDS, Please send your inquiry to export@greenrockchem.com

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