

## SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2024  
Revision Date: July 15, 2024

### SECTION 1: Identification

<!--{productinfo}-->

#### 1.3 Recommended use of the chemical and restrictions on use

Identified uses Industrial and scientific research use.  
Uses advised against no data available

#### 1.4 Supplier's details

<!--{companyinfo}-->

#### 1.5 Emergency phone number

<!--{Emergency phone number}-->

### SECTION 2: Hazard identification

#### 2.1 Classification of the substance or mixture

Flammable liquids, Category 2

#### 2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger  
Hazard statement(s) H225 Highly flammable liquid and vapour  
Precautionary statement(s)  
Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
Response P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].  
P370+P378 In case of fire: Use ... to extinguish.  
Storage P403+P235 Store in a well-ventilated place. Keep cool.  
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
Methyl butyrate	Methyl butyrate	623-42-7	210-792-1	≈ 99%

### SECTION 4: First-aid measures

#### 4.1 Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### 4.2 Most important symptoms/effects, acute and delayed

Irritating to the eyes, nose, throat, upper respiratory tract, and skin. (USCG, 1999)

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

Basic Treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary. Monitor for shock and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. Esters and related compounds

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped or safely confined. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide.

### 5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

no data available

#### 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Methyl butyrate is a clear colorless liquid. Flash point 57° F. Less dense than water and slightly soluble in water. Hence floats on water. Vapors heavier than air.
Colour	Colorless liquid
Odour	APPLE-LIKE ODOR
Melting point/freezing point	586° C(lit.)
Boiling point or initial boiling point and boiling range	102-103° C(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	14° C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	10 to 50 mg/mL at 72° F (NTP, 1992)
Partition coefficient n-octanol/water	log Kow= 1.29
Vapour pressure	40 mm Hg ( 30 ° C)
Density and/or relative density	0.898g/mL at 25° C(lit.)
Relative vapour density	3.5 (vs air)
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Highly flammable. Slightly soluble in water.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

FLAMMABLE, DANGEROUS FIRE RISK. METHYL BUTYRATE reacts exothermically with acids to generate alcohols and carboxylic acids. Strong oxidizing acids may cause a reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by interaction with basic or caustic solutions. Flammable hydrogen is generated by mixing with alkali metals and hydrides (NTP, 1992).

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

#### Acute toxicity

- Oral: LD50 Rabbit oral 3.38 g/kg
- Inhalation: no data available
- Dermal: no data available

#### 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**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

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**SECTION 12: Ecological information****12.1 Toxicity**

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

**12.2 Persistence and degradability**

Methyl n-butyrate was completely biodegraded by aquifer slurries under sulfate-reducing conditions during a 244 day incubation period and under nitrate-reducing conditions during an 85 day incubation period(1). A theoretical methane recovery of 93% was achieved for methyl n-butyrate in an anaerobic aquifer slurry(2). Methyl n-butyrate was rapidly biodegraded by an activated sludge during a 24 hour incubation period(3).

**12.3 Bioaccumulative potential**

An estimated BCF of 2 was calculated for methyl n-butyrate(SRC), using a log Kow of 1.29(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**

The Koc of methyl n-butyrate is estimated as 120(SRC), using a log Kow of 1.29(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that methyl n-butyrate is expected to have high mobility in soil(SRC).

**12.5 Other adverse effects**

no data available

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**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.

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**SECTION 14: Transport information****14.1 UN Number**

ADR/RID: UN1237 (For reference only, please check.)

IMDG: UN1237 (For reference only, please check.)

IATA: UN1237 (For reference only, please check.)

**14.2 UN Proper Shipping Name**

ADR/RID: METHYL BUTYRATE (For reference only, please check.)

IMDG: METHYL BUTYRATE (For reference only, please check.)

IATA: METHYL BUTYRATE (For reference only, please check.)

**14.3 Transport hazard class(es)**

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

**14.4 Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (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**

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**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
Methyl butyrate	Methyl butyrate	623-42-7	210-792-1
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			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.

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**SECTION 16: Other information**

## Information on revision

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## 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](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/>

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*Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*