

Chemical Safety Data Sheet MSDS / SDS

Methyl benzoate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Methyl benzoate

CAS: 93-58-3

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

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SECTION 2: Hazards identification**Classification of the substance or mixture**

Acute toxicity - Category 4, Oral

GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

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.

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name: Methyl benzoate

Common names and synonyms: Methyl benzoate

CAS number: 93-58-3
EC number: 202-259-7
Concentration: 100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

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. Do NOT induce vomiting. Rest.

Most important symptoms/effects, acute and delayed

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

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Organic acids and related compounds

SECTION 5: Firefighting measures

Suitable extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical

Special Hazards of Combustion Products: None (USCG, 1999)

Special protective actions for fire-fighters

Use foam, powder, carbon dioxide.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. 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.

Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. 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.

Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.; Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.; Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames. Above 83°C use a closed system and ventilation. 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.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Combustible liquids.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

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.

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 of moderate to poor tenacity.
Colour:	Colourless.
Odour:	Fragrant odor
Melting point/freezing point:	-14.5 °C. Atm. press.:1 013 hPa.
Boiling point or initial boiling point and boiling range:	199.5 °C. Atm. press.:1 013 hPa.
Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	77 °C. Atm. press.:1 013 hPa.
Auto-ignition temperature:	542 °C. Atm. press.:101.9 kPa.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	dynamic viscosity (in mPa s) = 1.94. Temperature:23.0°C.
Solubility:	Insoluble in water
Partition coefficient n-octanol/water:	log Pow = 2.12.
Vapour pressure:	0.38 mm Hg. Temperature:25 °C.
Density and/or relative density:	1.088. Temperature:20 °C.
Relative vapour density:	4.68 (vs air)

Particle
characteristics:

no data available

SECTION 10: Stability and reactivity

Reactivity

Slightly soluble in water. Hydrolyzes slowly in contact with water (NTP, 1992).

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

The vapour is heavier than air. METHYL BENZOATE is an ester. Esters react with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction of esters with caustic solutions. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides. This compound reacts with strong oxidizing agents and strong bases and hydrolyzes slowly in contact with water. (NTP, 1992).

Conditions to avoid

no data available

Incompatible materials

Incompatible with strong acids, strong bases, nitrates, oxidizers.

Hazardous decomposition products

When heated to decomposition, it emits fumes containing CO and CO₂.

SECTION 11: Toxicological information

Acute toxicity

Oral: LD₅₀ - rat (male/female) - 2 000 mg/kg bw.

Inhalation: no data available

Dermal: LD50 - rat (male/female) - > 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

If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. See Notes.

STOT-repeated exposure

no data available

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

Toxicity

Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - 23 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - 28.5 mg/L - 48 h.

Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 111.9 mg/L - 72 h.

Toxicity to microorganisms: EC50 - activated sludge - 815 mg/L - 3 h. Remarks: Respiration rate.

Persistence and degradability

AEROBIC: Methyl benzoate, present at 28 mg/L in activated sewage sludge, achieved 62% biodegradation in 29 days using a Modified Sturm test measuring carbon dioxide evolution and is considered readily biodegradable(1).

Bioaccumulative potential

An estimated BCF of 12 was calculated in fish for methyl benzoate(SRC), using a log Kow of 2.12(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).

Mobility in soil

The adsorption of methyl benzoate was determined by a modified version of the OECD guideline 106, a batch equilibrium method, in three soils with different characteristics: an acid forest soil (Podzol), an agricultural soil (Alfisol), and a sediment. The respective Freundlich constants, Kf (1/n), for the three soils were 8.64 (0.81), 1.29 (0.85), and 1.51 (0.84)(1). Koc values for the Podzol, Alfisol and sediment were 178, 103, and 95, respectively(1). Methyl benzoate also has a reported log Koc value of 2.10 (Koc = 126)(2). Using a structure estimation method based on molecular connectivity indices(3), the Koc of methyl benzoate can be estimated to be 70(SRC). According to a classification scheme(3), methyl benzoate is expected to have moderate to high mobility in soil.

Other adverse effects

no data available

SECTION 13: Disposal considerations

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

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.)

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.)

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.)

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.)

Environmental hazards

ADR/RID: No
IMDG: No

IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

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.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

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/>

Other Information

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

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