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-----ISO 9001: 2015-----

MATERIAL SAFETY DATA SHEET

1. Identification

1.1 GHS Product identifier
Methyl benzoate, 99%
Code M 1955

2. Hazard identification

2.1 Classification of the substance or mixture
Acute toxicity - Oral, Category 4
2.2 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.
P301+P312 IF SWALLOWED: Call a POISON
CENTER/doctor/2026 if you feel unwell.
P330 Rinse mouth.

Response

Storage

none

Disposal

P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
methyl benzoate	methyl benzoate	93-58-3	none	100%

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Fresh air, rest.

In case of skin contact

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

In case of eye contact

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

If swallowed

Rinse mouth. Do NOT induce vomiting. Rest.

4.2 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)

4.3 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/

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Specific hazards arising from the chemical

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

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 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.

6.3 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.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 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.

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

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. 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

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	Clear oily liquid
Colour	Colorless, transparent liquid
Odour	Fragrant odor
Melting point/ freezing point	-12\u00b0C(lit.)
Boiling point or initial boiling point and boiling range	198-199\u00b0C(lit.)
Flammability	Combustible.
Lower and upper explosion limit / flammability limit	no data available
Flash point	83\u00b0C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	less than 1 mg/mL at 22.5\u00b0C
Partition coefficient n-octanol/water (log value)	log Kow = 2.12
Vapour pressure	<1 mm Hg (20 \u00b0C)

Density and/or relative density	1.088g/mL at 20°C (lit.)
Relative vapour density	4.68 (vs air)
Particle characteristics	no data available

10. Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 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.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

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

11. Toxicological information

Acute toxicity

Oral: LD50 Mouse acute oral 3.0 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

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

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).

12.3 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).

12.4 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, K_f (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.

12.5 Other adverse effects

no data available



