

Chemical Safety Data Sheet MSDS / SDS

Methyl salicylate

Revision Date:2024-08-24 Revision Number:1

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

Product identifier

Product name : Methyl salicylate
CBnumber : CB8491046
CAS : 119-36-8
EINECS Number : 204-317-7
Synonyms : methyl salicylate,methyl 2-hydroxybenzoate

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
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 400-158-6606

SECTION 2: Hazards identification

Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Serious eye damage, Category 1

Label elements

Pictogram(s)

□

Signal word : Warning

Hazard statement(s)

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P405 Store locked up.

Prevention

P264 Wash ... thoroughly after handling.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: Methyl salicylate
Synonyms	: methyl salicylate, methyl 2-hydroxybenzoate
CAS	: 119-36-8
EC number	: 204-317-7
MF	: C ₈ H ₈ O ₃
MW	: 152.15

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

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

Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give a slurry of activated charcoal in water to drink. Refer for medical attention .

Most important symptoms and effects, both acute and delayed

Harmful if swallowed, inhaled, absorbed through skin. Vapor mist is irritating to the eyes, mucous membranes, upper respiratory tract and skin. Ingestion of relatively small amount causes severe poisoning and death. Causes nausea, vomiting, acidosis, pulmonary edema, pneumonia, convulsions and death. (USCG, 1999)

Indication of any immediate medical attention and special treatment needed

Minimum/Potential Fatal Human Dose

4= very toxic: probable oral lethal dose (human) 50-500 mg/kg, between 1 teaspoon & 1 oz for 70 kg person (150 lb).

Absorption, Distribution and Excretion

May be absorbed rapidly through intact skin. bowel absorption is somewhat erratic ... absorbed at least in part as the intact ester and small amt are even excreted as such by the kidneys .

SECTION 5: Firefighting measures

Extinguishing media

Water, foam, carbon dioxide, dry chemical.

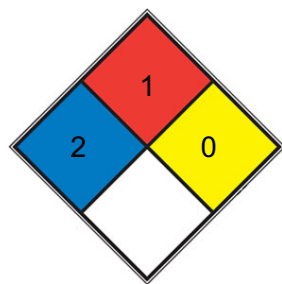
Specific Hazards Arising from the Chemical

This chemical is combustible. (NTP, 1992)

Advice for firefighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

NFPA 704



■ HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

■ FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

■ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

□ SPEC.
□ HAZ.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do NOT let this chemical enter the environment. 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

Do NOT let this chemical enter the environment. 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

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.

SECTION 7: Handling and storage

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.

Conditions for safe storage, including any incompatibilities

Separated from strong oxidants and strong bases. METHYL SALICYLATE SHOULD BE STORED AND DISPENSED IN TIGHT CONTAINERS.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Exposure 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

Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	Liquid
Colour	Clear colorless to pale yellow
Odour	LIQUID HAVING THE CHARACTERISTIC ODOR OF WINTERGREEN
Melting point/freezing point	-0.8 °C. Remarks:This melting point value has been measured.;-8.3 °C. Remarks:This melting point value is taken from another study (Schneider, 1897).
Boiling point or initial boiling point and boiling range	40 - 50 °C. Atm. press.:3 mm Hg. Remarks:This boiling point value is measured.;222 °C. Atm. press.:760 mm Hg. Remarks:This BP value is taken from another study (Pouchert C.J. & Behnke J., 1993).
Flammability	Combustible.
Lower and upper explosion limit/flammability limit	no data available
Flash point	95.5 °C.
Auto-ignition temperature	850 °F. Remarks:No data on the pressure of the measurement.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	dynamic viscosity (in mPa s) = 1.535. Temperature:25°C.
Solubility	Very slightly soluble in water, miscible with ethanol (96 per cent) and with fatty and essential oils.
Partition coefficient n-octanol/water	log Pow = 2.55. Remarks:No data on the temperature of the selected value of the data base is reported.
Vapour pressure	1 mm Hg (54 °C)
Density and/or relative density	1.178. Temperature:25°C.
Relative vapour density	5.26 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

Reacts with strong oxidants and strong bases.

Chemical stability

Sensitive to light and heat

Possibility of hazardous reactions

SLIGHT, WHEN EXPOSED TO HEAT OR FLAME; CAN REACT WITH OXIDIZING MATERIALS.METHYL SALICYLATE 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 chemical is incompatible with oxidizers. It is also incompatible with strong bases. It may react with iron salts. (NTP, 1992)

Conditions to avoid

no data available

Incompatible materials

Incompatibilities: decomp by alkalies to form methyl alc & salicylate.

Hazardous decomposition products

no data available

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 - rat (male/female) - 887 mg/kg bw. Remarks:Slope 1.5 (1.2-1.8).
- Inhalation: LC50 - rat (male) - > 0.9 mg/L air (analytical).
- Dermal: LD50 - rabbit - > 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 substance is irritating to the eyes and skin. The substance may cause effects on the central nervous system. This may result in shock and death. The effects may be delayed. Medical observation is indicated.

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 - *Pimephales promelas* - 19.8 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 870 mg/L - 48 h.

Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - 27 mg/L - 72 h.

Toxicity to microorganisms: EC10 - *Pseudomonas putida* - 140 mg/L - 16 h.

Persistence and degradability

Methyl salicylate in a five day BOD test exhibited a value of 55-57% of the theoretical BOD(1,2). Another 5-day BOD determination yielded 65% of the theoretical BOD(3). Methyl salicylate was completely degraded by a microbial mixture when incubated for 7 days at 30 deg C(4). Significant biodegradation of methyl salicylate in the environment would be expected from this result; however no data concerning biodegradation in natural waters or soil could be located.

Bioaccumulative potential

The log octanol/water partition coefficient for methyl salicylate is 2.55(1). The BCF estimated from this log Kow using a regression equation is 4 which indicates that the ester will not bioconcentrate in fish(SRC).

Mobility in soil

The Koc for methyl salicylate estimated from molecular structure is 128(1) and is 33(3,SRC) estimated from its water solubility, 7400 mg/L(2), using a regression equation. According to a suggested classification scheme(4), these low Koc values suggest that methyl salicylate would be highly or very highly mobile in soil(SRC).

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

Not 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/>

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