

## Chemical Safety Data Sheet MSDS / SDS

## m-diethylbenzene SDS

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

Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8
Section 9	Section 10	Section 11	Section 12	Section 13	Section 14	Section 15	Section 16

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

Product name: m-diethylbenzene

CAS: 141-93-5

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

Relevant identified uses: For R&amp;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**

Flammable liquids, Category 3

Aspiration hazard, Category 1

Skin irritation, Category 2  
Eye irritation, Category 2  
Specific target organ toxicity - single exposure, Category 3  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H226 Flammable liquid and vapour  
H304 May be fatal if swallowed and enters airways  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H411 Toxic to aquatic life with long lasting effects

### 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/...  
P264 Wash ... thoroughly after handling.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.

#### 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.  
P301+P316 IF SWALLOWED: Get emergency medical help immediately.

P331 Do NOT induce vomiting.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P319 Get medical help if you feel unwell.  
P391 Collect spillage.

### Storage

P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### 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:	m-diethylbenzene
Common names and synonyms:	m-diethylbenzene
CAS number:	141-93-5
EC number:	205-511-4
Concentration:	100%

## SECTION 4: First aid measures

## **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.

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

no data available

### **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 . Aromatic hydrocarbons and related compounds

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

To fight fire, use carbon dioxide, dry chemical. diethyl benzene

### **Specific hazards arising from the chemical**

no data available

### **Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **SECTION 6: Accidental release measures**

### **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.

### **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.

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

Methods to reduce hydrocarbons from effluents are described. mixt of diethylbenzene isomers was one of water pollutants. diethylbenzene isomers

## **SECTION 7: Handling and storage**

### **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.

### **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.

## **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 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

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

Physical state:	Colorless liquid with an aromatic odor.
Colour:	no data available
Odour:	no data available
Melting point/freezing point:	-84.2°C

Boiling point or initial boiling point and boiling range:	181.7°C at 760 mmHg
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	50.6°C
Auto-ignition temperature:	806 DEG F (430 DEG C). /DIETHYLBENZENE/
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	1.24X10 <sup>-2</sup> Pa.s @ 189.26 K
Solubility:	Miscible in ethanol, ethyl ether and acetone
Partition coefficient n-octanol/water:	log Kow= 4.44
Vapour pressure:	1.15mmHg at 25°C
Density and/or relative density:	0.864
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

**Chemical stability**

no data available

**Possibility of hazardous reactions**

Flammable liquid when exposed to heat or flame ... Diethyl benzene

**Conditions to avoid**

no data available

**Incompatible materials**

Can react with oxidizing materials. Diethyl benzene

**Hazardous decomposition products**

When heated to decomposition it emits acrid smoke and irritating fumes.

**SECTION 11: Toxicological information****Acute toxicity**

Oral: no data available

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

**SECTION 12: Ecological information**

**Toxicity**

Toxicity to fish: LC50 Pimephales promelas (fathead minnow) 4.15 mg/l/96 hr (confidence limit 4.05 - 4.25 mg/l), flow-through bioassay with measured concentrations, 23.5 deg C, dissolved oxygen 7.5 mg/l, hardness 45.8 mg/l calcium carbonate, alkalinity 42.2 mg/l calcium carbonate, and pH 7.28.

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

1,3-Diethylbenzene at a concn of 0.5 ppm C was completely removed within 5 days from a gas oil mixture added to acclimated fresh-wellwater grab samples from Tuffenwies and Zurich, Switzerland, with a pH of 8.0, at 10 and 25 deg C and microbial populations of 300-400 cells/ml(1). A gas oil sample with an overall concn of 0.5 ppm contained 1,3-diethylbenzene, which degraded at a moderate rate in North Sea coastal water maintained at 20 deg C for 14 days(2).

#### **Bioaccumulative potential**

An estimated BCF of 520 was calculated for 1,3-diethylbenzene(SRC), using a log Kow of 4.44(1,SRC) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high.

#### **Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the Koc for 1,3-diethylbenzene can be estimated to be 1600(SRC). According to a classification scheme(2), this estimated Koc value suggests that 1,3-diethylbenzene is expected to have low 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: UN2049 (For reference only, please check.)  
IMDG: UN2049 (For reference only, please check.)  
IATA: UN2049 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: DIETHYLBENZENE (For reference only, please check.)  
IMDG: DIETHYLBENZENE (For reference only, please check.)  
IATA: DIETHYLBENZENE (For reference only, please check.)

#### **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.)

#### **Packing group, if applicable**

ADR/RID: III (For reference only, please check.)  
IMDG: III (For reference only, please check.)  
IATA: III (For reference only, please check.)

#### **Environmental hazards**

ADR/RID: Yes  
IMDG: Yes  
IATA: Yes

#### **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](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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