

## Chemical Safety Data Sheet MSDS / SDS

## Dodecylbenzene 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: Dodecylbenzene

CAS: 123-01-3

**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

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

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

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 4

**GHS label elements, including precautionary statements**

Signal word                      No signal word

**Hazard statement(s)**

H413 May cause long lasting harmful effects to aquatic life

**Precautionary statement(s)****Prevention**

P273 Avoid release to the environment.

**Response**

none

**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:                      Dodecylbenzene

Common names and  
synonyms:                      Dodecylbenzene

CAS number:                      123-01-3

EC number:                      204-591-8

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. Give one or two glasses of water to drink.

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

Liquid causes mild irritation of eyes and may cause allergenic responses on repeated contact with skin. Ingestion causes nausea. (USCG, 1999)

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

no data available

## SECTION 5: Firefighting measures

### Suitable extinguishing media

To fight fire, use foam, carbon dioxide, dry chemical.

### Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

### Special protective actions for fire-fighters

Use water spray, powder, foam, 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 metal 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 metal 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**

It can be sulfonated in wastes & recycled.

## **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**

In general, materials...toxic as stored or which can decomp into toxic components...should be stored in cool...ventilated place, out of...sun, away from...fire hazard...be periodically inspected & monitored. incompatible material should be isolated...

## **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:	Dodecylbenzene is a colorless liquid with a weak oily odor. Floats on water. (USCG, 1999)
Colour:	COLORLESS LIQUID
Odour:	WEAK OILY ODOR
Melting point/freezing point:	297°C(lit.)
Boiling point or initial boiling point and boiling range:	148°C/1mmHg(lit.)
Flammability:	Combustible.

Lower and upper explosion limit/flammability limit:	no data available
Flash point:	124°C(lit.)
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 77° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Kow= 8.26
Vapour pressure:	211.97 mm Hg (USCG, 1999)
Density and/or relative density:	0.85
Relative vapour density:	8.47 (NTP, 1992) (Relative to Air)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

**Possibility of hazardous reactions**

COMBUSTIBLE WHEN EXPOSED TO HEAT OR FLAME; CAN REACT WITH OXIDIZING MATERIALS. Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic hydrocarbons, such as DODECYLBENZENE, and strong oxidizing agents. They can react exothermically with bases and with diazo compounds. Substitution at the benzene nucleus occurs by halogenation (acid catalyst), nitration, sulfonation, and the Friedel-Crafts reaction.

**Conditions to avoid**

no data available

**Incompatible materials**

Can react with oxidizing materials.

**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**

The substance is irritating to the eyes and skin.

**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: 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

**Persistence and degradability**

Various pure cultures of bacteria were shown to degrade dodecylbenzene(1,2). An activated sludge compound was shown to oxidize dodecylbenzene during a 180 hour incubation period(3). River die-away tests have shown linear alkylbenzenes are readily biodegradable, with half-lives of 4.8 and 10.1 days for C-12 isomers in river water(4).



### **Bioaccumulative potential**

An estimated BCF of 38 was calculated for dodecylbenzene(SRC), using a log Kow of 8.26(1), and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests bioconcentration in aquatic organisms is moderate. The BCF value of bluegill sunfish exposed to dodecylbenzene in a flow-through aquarium was 35(4).

### **Mobility in soil**

The Koc of dodecylbenzene is estimated as  $7.4 \times 10^5$ (SRC), using a log Kow of 8.26(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that dodecylbenzene is expected to be immobile 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: UN3265 (For reference only, please check.)

IMDG: UN3265 (For reference only, please check.)

IATA: UN3265 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)  
IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)  
IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

**Transport hazard class(es)**

ADR/RID: 8 (For reference only, please check.)  
IMDG: 8 (For reference only, please check.)  
IATA: 8 (For reference only, please check.)

**Packing group, if applicable**

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

The technical product consists of a mixture of isomers; the boiling point and other physical properties will vary depending on composition.

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