

## Chemical Safety Data Sheet MSDS / SDS

## Diallyl phthalate 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: Diallyl phthalate

CAS: 131-17-9

**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

Telephone: +91 9550333722

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

Acute toxicity - Category 4, Oral

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

**GHS label elements, including precautionary statements**

Pictogram(s)



Signal word

Warning

**Hazard statement(s)**

H302 Harmful if swallowed

H410 Very toxic to aquatic life with long lasting effects

**Precautionary statement(s)**

**Prevention**

P264 Wash ... thoroughly after handling.

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

P273 Avoid release to the environment.

**Response**

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P391 Collect spillage.

**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:             | Diallyl phthalate |
| Common names and synonyms: | Diallyl phthalate |
| CAS number:                | 131-17-9          |
| EC number:                 | 205-016-3         |
| 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**

Rinse with plenty of water for several minutes (remove contact lenses if easily possible).

**Following ingestion**

Rinse mouth.

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

**SYMPTOMS:** Symptoms of exposure to this compound include irritation of the skin, eyes and mucous membranes. At very high levels, toxic effects include central nervous system depression. It can cause internal disorders by continued skin absorption. Inhalation may cause nose, throat and lung irritation, lung congestion and liver damage. Eye contact may cause burning. It may cause lacrimation. Other symptoms include coughing, sneezing, thirst, respiratory distress, sore throat, headache and abdominal pain. **ACUTE/CHRONIC HAZARDS:** This compound is toxic by ingestion. It may cause irritation of the eyes, skin and mucous membranes. It is also a lacrimator. It can be absorbed through the skin. When heated to decomposition this compound emits acrid smoke, irritating fumes and toxic fumes of carbon monoxide and carbon dioxide. (NTP, 1992)

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

### **Absorption, Distribution and Excretion**

Thirty minutes after rats and mice were treated orally with (14)C-labeled diallyl phthalate (DAP), the highest levels of radioactivity were found in small intestine, liver, dermis, muscles, blood, and kidneys. After 24 hr, about 6-7% of the radioactivity was present in rats and 1-3% in mice. In rats, 60% of the radioactivity was found in urine and 30% was exhaled as CO<sub>2</sub>. In mice, 91% was present in urine, and only 8% was detected as CO<sub>2</sub>.

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

Water or foam may cause frothing.

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

This chemical is combustible. (NTP, 1992)

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

Use powder, carbon dioxide, foam.

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

### **Personal precautions, protective equipment and emergency procedures**

Ventilation. Do NOT let this chemical enter the environment. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### **Environmental precautions**

Ventilation. Do NOT let this chemical enter the environment. Collect leaking liquid in covered containers. 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, strong bases and acids. Store only if stabilized. Store in an area without drain or sewer access.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

|                |                           |                   |                          |                   |
|----------------|---------------------------|-------------------|--------------------------|-------------------|
| Component      | Diallyl phthalate         |                   |                          |                   |
| CAS No.        | 131-17-9                  |                   |                          |                   |
|                | Limit value - Eight hours |                   | Limit value - Short term |                   |
|                | ppm                       | mg/m <sup>3</sup> | ppm                      | mg/m <sup>3</sup> |
| Austria        | ?                         | 5                 | ?                        | ?                 |
| Denmark        | ?                         | 3                 | ?                        | 6                 |
| Ireland        | ?                         | 5                 | ?                        | ?                 |
| Latvia         | ?                         | 1                 | ?                        | ?                 |
| New Zealand    | ?                         | 5                 | ?                        | ?                 |
| United Kingdom | ?                         | 5                 | ?                        | ?                 |
|                | Remarks                   |                   |                          |                   |

### 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. Protective clothing.

#### **Respiratory protection**

Use ventilation.

#### **Thermal hazards**

no data available

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

|   |  |
|---|--|
| Physical state:   | PHYSICAL DESCRIPTION: Clear pale-yellow liquid. Odorless. (NTP, 1992)  |
| Colour:   | Nearly colorless, oily liquid  |
| Odour:  | mild lachrymatory  |
| Melting point/freezing point:                             | 133°C(lit.)  |
| Boiling point or initial boiling point and boiling range: | 158°C/5mmHg(lit.)  |
| Flammability:   | Combustible. Gives off irritating or toxic fumes (or gases) in a fire. |
| Lower and upper explosion limit/flammability limit:       | no data available  |
| Flash point:  | 163°C(lit.)  |
| Auto-ignition temperature:                                | 385°C  |
| Decomposition temperature:                                | no data available  |
| pH:   | no data available  |

|  |  |
|--|--|
| Kinematic viscosity:                   | 13 cP at 20 deg C                        |
| Solubility:                            | less than 0.1 mg/mL at 72° F (NTP, 1992) |
| Partition coefficient n-octanol/water: | log Kow = 3.23                           |
| Vapour pressure:                       | 2.3 mm Hg ( 150 °C)                      |
| Density and/or relative density:       | 1.12                                     |
| Relative vapour density:               | 8.3 (vs air)                             |
| Particle characteristics:              | no data available                        |

## SECTION 10: Stability and reactivity

### Reactivity

The substance polymerizes due to heating or in the presence of a catalyst, if not inhibited. On combustion, forms toxic gases. Reacts with strong oxidants, acids and bases.

### Chemical stability

no data available

### Possibility of hazardous reactions

Limiting oxygen index (LOI): 26-36 /for diallyl phthalate/. This is a measure of the minimum concentration of oxygen in an oxygen-nitrogen atmosphere that is necessary to support a flame for at least 3 minutes under specified test conditions. DIALLYL PHTHALATE can react with oxidizers. It can also react with acids and alkalis. It is incompatible with water and oxygen. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

Can react with oxidizing materials.

**Hazardous decomposition products**

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

**SECTION 11: Toxicological information**

**Acute toxicity**

Oral: LD50 Rat oral 656 mg/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**

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

**STOT-repeated exposure**

Repeated or prolonged contact may cause skin sensitization.

**Aspiration hazard**

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: *Daphnia magna* (Water flea); Conditions: freshwater, renewal, 25 deg C, pH >7; Concentration: 26000 µg/L for 24 hr; Effect: behavior, equilibrium /formulated product

Toxicity to algae: EC50; Species: *Scenedesmus subspicatus* (Green algae, log growth phase); Conditions: freshwater, static, 24 deg C, pH 8.0-9.3; Concentration: 5300 µg/L for 48 hr; Effect: decreased population biomass /formulated product

Toxicity to microorganisms: no data available

**Persistence and degradability**

AEROBIC: Diallyl phthalate, present at 100 mg/L, reached 92% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1) .

**Bioaccumulative potential**

An estimated BCF of 61 was calculated in fish for diallyl phthalate(SRC), using a log Kow of 3.23(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC).

**Mobility in soil**

The Koc of diallyl phthalate is estimated as 1,360(SRC), using a log Kow of 3.23(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that diallyl phthalate 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: UN3082 (For reference only, please check.)

IMDG: UN3082 (For reference only, please check.)

IATA: UN3082 (For reference only, please check.)

**UN Proper Shipping Name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (For reference only, please check.)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (For reference only, please check.)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (For reference only, please check.)

**Transport hazard class(es)**

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (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

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**

An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert.

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