

## Chemical Safety Data Sheet MSDS / SDS

## 3,5-xylidine 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: 3,5-xylidine

CAS: 108-69-0

**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 3, Oral

Acute toxicity - Category 3, Dermal

Acute toxicity - Category 3, Inhalation  
Specific target organ toxicity - repeated exposure, Category 2  
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)

H301 Toxic if swallowed  
H311 Toxic in contact with skin  
H331 Toxic if inhaled  
H373 May cause damage to organs through prolonged or repeated exposure  
H411 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.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.

### Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P316 Get emergency medical help immediately.  
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.  
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

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: 3,5-xylydine

Common names and synonyms: 3,5-xylydine

CAS number: 108-69-0

EC number: 203-607-0

Concentration: 100%

## SECTION 4: First aid measures

### Description of necessary 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

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

### **Following ingestion**

Rinse mouth. Refer for medical attention .

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

**SYMPTOMS:** Symptoms of exposure to this compound may include headaches, drowsiness, cyanosis, mental confusion, convulsions, nervous system and blood effects, fatigue, loss of appetite and dizziness. **ACUTE/CHRONIC HAZARDS:** This compound may be absorbed through the skin and may cause irritation on contact. When heated to decomposition it emits toxic fumes. (NTP, 1992)

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

no data available

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

Use water spray, dry chemical, foam, or CO<sub>2</sub>; wear full protective clothing. xylydines

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

This chemical is combustible. (NTP, 1992)

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

Use water spray, carbon dioxide, foam, powder.

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

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

Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. 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**

Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. 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**

Environmental considerations - land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. /SRP: If time permits, pits, ponds, lagoons, soak holes, or holding areas should be sealed with an impermeable flexible membrane liner. / Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash, cement powder, or commercial sorbents. Xylidines

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

#### **Precautions for safe handling**

NO open flames. Above 93°C use a closed system and ventilation. 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, acids, acid anhydrides, acid chlorides, hypochlorites, halogens and food and feedstuffs. Well closed. Store in an area without drain or sewer access.

### **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

#### **Occupational Exposure limit values**

MAK: skin absorption (H); carcinogen category: 3A

#### **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 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 and safety characteristics

Physical state:	Liquid.
Colour:	Yellow-red.
Odour:	no data available
Melting point/freezing point:	$\geq 8 - \leq 10$ °C. Atm. press.: 1 013 mBar.
Boiling point or initial boiling point and boiling range:	$\geq 218 - \leq 222$ °C. Atm. press.: 1 013 mBar.
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:	$\geq 93 - \leq 103$ °C.

Auto-ignition temperature:	590 °C. Atm. press.:1 013 hPa.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	less than 1 mg/mL at 66° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Pow = >= 1.66 - <= 2.09. Remarks:No datas of temperature or pH.
Vapour pressure:	1.3 hPa. Temperature:20 °C.;27 hPa. Temperature:100 °C.
Density and/or relative density:	0.97 g/cm <sup>3</sup> . Temperature:20 °C.;0.98 g/cm <sup>3</sup> . Temperature:12.1 °C.;0.99 g/cm <sup>3</sup> . Temperature:0 °C.
Relative vapour density:	(air = 1): 4.19
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Decomposes on burning. This produces toxic and corrosive fumes including nitrogen oxides. Reacts violently with strong oxidants. Reacts with hypochlorites. This produces explosive chloroamines. Reacts with acids, acid anhydrides, acid chlorides and halogens. Attacks plastic and rubber.

### Chemical stability

no data available

### Possibility of hazardous reactions

3,5-XYLIDINE ignites on contact with fuming nitric acid (NTP, 1992). Neutralizes acids in exothermic reactions to form salts plus water. May be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid

halides. Flammable gaseous hydrogen may be generated in combination with strong reducing agents, such as hydrides.

**Conditions to avoid**

no data available

**Incompatible materials**

Strong oxidizers, hypochlorite bleaches Xylidines

**Hazardous decomposition products**

When heated to decomp, xylidines emit highly toxic fumes. xylidines

**SECTION 11: Toxicological information**

**Acute toxicity**

Oral: LD50 - rat (male) - 710 mg/kg bw.

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**

A3; Confirmed animal carcinogen with unknown relevance to humans. Xylidine (mixed isomers)

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

Exposure at high levels could cause lowering of consciousness. Exposure at high levels could cause formation of methaemoglobin. The effects may be delayed. Medical observation is indicated.

### **STOT-repeated exposure**

The substance may have effects on the blood. This may result in anaemia.

### **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: LC50 - *Oryzias latipes* - 35 mg/L - 24 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - no data - 2.2 mg/L - 48 h.

Toxicity to algae: EC50 - no data - 29 mg/L - 72 h.

Toxicity to microorganisms: no data available

### **Persistence and degradability**

3,5-Xylidine, initially present at 20 mg/l, was 53% degraded in 6 hours using an activated sludge inoculum under aerobic conditions(1). *E. coli* converted 3,5-xylidine to the corresponding (phenylazo)naphthol in the presence of nitrate with this reaction proceeding within 24 hours(2).

### **Bioaccumulative potential**

An estimated BCF value of 26 was calculated for 3,5-xylidine(SRC), using an estimated log Kow of 2.2(1,SRC) and a recommended regression-derived equation(2). According to a classification scheme(3), this BCF value suggests that bioconcentration in aquatic organisms is low(SRC).

#### **Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the Koc for 3,5-xylidine can be estimated to be about 120(SRC). According to a recommended classification scheme(2), this estimated Koc value suggests that 3,5-xylidine has high mobility in soil(SRC). However, anilines are expected to bind strongly to humus or soil organic matter in soils due to the high reactivity of the aromatic amino group(3,4). Low adsorption is observed at a neutral pH with pure clay minerals or soils for substituted anilines(4).

#### **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: UN1711 (For reference only, please check.)

IMDG: UN1711 (For reference only, please check.)

IATA: UN1711 (For reference only, please check.)

### **UN Proper Shipping Name**

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

IMDG: XYLIDINES, LIQUID (For reference only, please check.)

IATA: XYLIDINES, LIQUID (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

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

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

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

IATA: II (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)**

Not Listed.

### **(PICCS)**

Not 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

Depending on the degree of exposure, periodic medical examination is suggested. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available. TLV only established for mixed isomers. See also ICSC 0600 (Xylidine, mixed isomers), 1519 (2,6-Xylidine), 0451 (2,3-Xylidine), 0453 (3,4-Xylidine), 1562 (2,4-Xylidine), 1686 (2,5-Xylidine).

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