

## Chemical Safety Data Sheet MSDS / SDS

## O-TOLUIDINE HYDROCHLORIDE

Revision Date:2025-06-14 Revision Number:1

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

## Product identifier

Product name : O-TOLUIDINE HYDROCHLORIDE  
CBnumber : CB6264228  
CAS : 636-21-5  
EINECS Number : 211-252-8  
Synonyms : o-toluidine hydrochloride, PRILOCAINE RELATED COMPOUND A

## 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 : 010-86108875

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Acute toxicity - Category 4, Dermal  
Acute toxicity - Category 4, Inhalation  
Carcinogenicity, Category 1B

## Label elements

## Pictogram(s)

☐

Signal word Danger

## Hazard statement(s)

H350 May cause cancer

## Precautionary statement(s)

P201 Obtain special instructions before use.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.

### Prevention

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.

P203 Obtain, read and follow all safety instructions before use.

### Response

P302+P352 IF ON SKIN: Wash with plenty of water/...

P317 Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P318 IF exposed or concerned, get medical advice.

### Storage

P405 Store locked up.

### 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

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: O-TOLUIDINE HYDROCHLORIDE
Synonyms	: o-toluidine hydrochloride, PRILOCAINE RELATED COMPOUND A
CAS	: 636-21-5
EC number	: 211-252-8
MF	: C7H10ClN
MW	: 143.61

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## SECTION 4: First aid measures

### Description of 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 and effects, both acute and delayed**

SYMPTOMS: Symptoms of exposure to this compound include methemoglobinemia, cyanosis, central nervous system depression, vesiculation, anorexia, headache, weight loss, nausea, vomiting, diarrhea, dizziness, drowsiness, weakness, dyspnea, toxic psychosis, irritability, stupor, lethargy, unconsciousness, hemolytic anemia, kidney damage, anuria, liver damage, jaundice, bladder ulceration, hematuria and dermatitis. Symptoms of exposure to a related compound include anoxia. Eye burns may occur. Eye irritation may also occur. Other symptoms include skin irritation and coma. Inhalation may cause pallor, low-grade secondary anemia, fatigability and loss of appetite. Death may occur from severe exposure. Corneal damage has been reported. ACUTE/CHRONIC HAZARDS: This compound is absorbed through the gastrointestinal tract. When heated to decomposition it emits very toxic fumes of hydrogen chloride and nitrogen oxides. (NTP, 1992)

### **Indication of any immediate medical attention and special treatment needed**

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

Following a single dose (400 mg/kg sc) of o-(methyl-(14)C)-toluidine ... to male F344 rats, 56% of the (14)C was recovered in the 24 hr urine, 2.4% in the feces and 1% as exhaled (14)CO<sub>2</sub>. After 48 hr, 83.9% of the (14)C appeared in the urine, 3.3% in the feces and 1.4% was exhaled. 2-Aminotoluene

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## **SECTION 5: Firefighting measures**

### **Extinguishing media**

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

### **Specific Hazards Arising from the Chemical**

Flash point data for this chemical are not available; however, it is probably combustible. (NTP, 1992)

### **Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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## **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**

1. ventilate area of spill or leak. 2. for small quantities, absorb on paper towels. evaporate in safe place (such as fume hood). allow sufficient time for evaporating vapors to completely clear hood ductwork. burn paper in suitable location away from combustible materials. o-toluidine

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## 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

PRECAUTIONS FOR "CARCINOGENS": Storage site should be as close as practical to lab in which carcinogens are to be used, so that only small quantities required for ... expt need to be carried. Carcinogens should be kept in only one section of cupboard, an explosion-proof refrigerator or freezer (depending on chemico-physical properties ...) that bears appropriate label. An inventory ... should be kept, showing quantity of carcinogen & date it was acquired ... Facilities for dispensing ... should be contiguous to storage area. Chemical Carcinogens

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## 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flammable 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

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	neat
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Colour	White to Grey
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Odour	no data available
Melting point/freezing point	215-217°C(lit.)
Boiling point or initial boiling point and boiling range	200.4°C at 760 mmHg
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	85°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO (Slightly), Methanol (Slightly), Water (Slightly)
Partition coefficient n-octanol/water	no data available
Vapour pressure	no data available
Density and/or relative density	no data available
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

O-TOLUIDINE HYDROCHLORIDE acts as a weak acid. Incompatible with oxidizing agents and with alkalis (NTP, 1992).

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

When heated to decomp it emits very toxic fumes of /hydrogen chloride and nitrogen oxides/.

## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Mouse oral 1100 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**

The Human Health Assessment Group in EPA's Office of Health and Environmental Assessment has evaluated o-toluidine hydrochloride for carcinogenicity. According to their analysis, the weight-of-evidence for o-toluidine hydrochloride is group B2, which is based on inadequate evidence in humans and sufficient evidence in animals. As a group B2 chemical, o-toluidine hydrochloride is considered to be probably carcinogenic to humans.

#### **Reproductive toxicity**

no data available

#### **STOT-single exposure**

no data available

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

no data available

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## **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**

Thirty-eight process wastewaters and 37 organic substances identified in the wastewater of the Kashima petrochemical complex were subjected to the activated sludge degradability test. The test used the activated sludge of the Fukushima industrial wastewater treatment plant,

which was acclimatized to the wastewater and organic substances. Water in the test container was sampled during aeration at 0 hr and 24 hr later. After 1 day of acclimation, 100 mg/l of 2-methylaniline resulted in a chemical oxygen demand (Mn) of 92% and 83% total organic carbon. 2-methylaniline

#### **Bioaccumulative potential**

no data available

#### **Mobility in soil**

no data available

#### **Other adverse effects**

no data available

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## 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.

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## SECTION 14: Transport information

### **UN Number**

ADR/RID: UN2811 (For reference only, please check.)

IMDG: UN2811 (For reference only, please check.)

IATA: UN2811 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IATA: TOXIC SOLID, ORGANIC, N.O.S. (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: 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

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## **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)**

Not Listed.

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## **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/>

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.