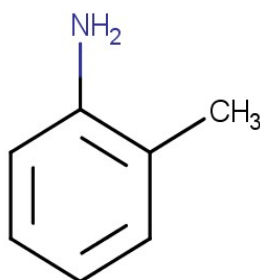


## 1. General Statement

o-Toluidine (ortho-toluidine) is an organic compound. It is the most important of the three isomeric toluidines. It is a colorless liquid although commercial samples are often yellowish. It is a precursor to the herbicides metolachlor and acetochlor.

## 2. Chemical identity

Name : o-toluidine  
CAS number(s) : 95-53-4  
EC number : 202-429-0  
Molecular formula : C<sub>7</sub>H<sub>9</sub>N  
Structure :



## 3. Uses and Benefits not mandatory

It is used primarily in the manufacture of dyestuffs, although it is also used in the production of rubber, chemicals, and pesticides and as a curing agent for epoxy resin systems.

## 4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Colourless to light yellow. On exposure to air: yellow-brown to red-brown.
Odour :	Mild odour. Aromatic odour.
pH :	No data available
Melting point	-24 to -16 °C
Boiling point :	200 °C (1013 hPa)
Flash point :	85 °C (Closed cup, 1013 hPa)

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Density :	998 kg/m <sup>3</sup> (20 °C)
Solubility Water:	1.66 g/100ml (20 °C)

### 5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal )	Toxic if swallowed or if inhaled.
Irritation / corrosion Skin / eye/ respiratory tract	Causes serious eye irritation.
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	May cause cancer.
Toxicity for reproduction	NA

### 6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 7. Exposure

#### Human health

The substance May cause cancer and toxicity if swallowed or if inhaled.

The most likely route of human exposure (workers) is through skin. In industrial settings, ingestion is not an anticipated route of exposure. Workers may be exposed during (un)loading, mixing, sampling, analysis or maintenance operations and particularly in case of batch processes. The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

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Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. The substance is handled in closed systems, and it is usual for operators to wear impervious suits and self-contained breathing apparatus for operations involving the transfer of dimethyl sulfate, where there is the possibility of greater exposure.

Industrial Workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

### Environment

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

## 8. Risk Management Recommendations

### Human health measures

<b>Organizational</b>	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
<b>Protection</b>	Eye protection:	Safety glasses
	Skin and body protection:	Wear Protective clothing
	Respiratory protection:	Full face mask with filter type A. High vapour/gas concentration: self-contained breathing apparatus
<b>Engineering controls</b>	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.	
<b>Environment protective measures</b>		
Product must not be released into water without pre-treatment.		

## 9. First-aid measures

**First-aid measures after inhalation** : Remove victims into fresh air. Immediately consult a doctor/medical service.

**First-aid measures after skin contact** : If possible, wipe up/dry remove chemicals. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

**First-aid measures after eye contact** : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

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**First-aid measures after ingestion** : Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult the Poison Center.

### 10. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if the puddle cannot expand.

Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : On burning: release of toxic and corrosive gases/vapours.

#### **Advice for firefighters**

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

### 11. Accidental release measures

**Protective equipment** :Gloves, Safety glasses , Protective clothing, Large spills/in enclosed spaces: self-contained breathing apparatus.

**Environmental precautions:** Prevent soil and water pollution. Prevent spreading in sewers.

**For containment** : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Heat exposure: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.

### 12. Disposal consideration

**Regional legislation (waste)** : Disposal must be done according to official regulations.

**Waste treatment methods** : Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Sewage disposal recommendations** : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be

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mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

### 13. Handling and storage

**Precautions for safe handling** : At temperature > flashpoint: use spark /explosion proof appliances. Keep away from naked flames/heat. In a finely divided state: use spark-/explosion proof appliances. Finely divided:keep away from ignition sources/sparks. Measure the concentration in the air regularly.Carry operations in the open/under local exhaust/ventilation or with respiratory protection.Comply with the legal requirements. Clean contaminated clothing. Keep the container tightly closed. Do not discharge the waste into the drain.

**Hygiene measures** : Always wash hands after handling the product. Remove contaminated clothes. Wear personal protective equipment.Observe strict hygiene.

### 14. Classification and Labeling

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301+H331 - Toxic if swallowed or if inhaled.  
H319 - Causes serious eye irritation.  
H350 - May cause cancer.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.

### 15. Conclusion

The substance May cause cancer , and toxicity if swallowed or if inhaled. Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

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### 16. Contact Information within company

#### **Manufacturer**

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This GPS safety summary is intended to give general information about the health, safety and environmental and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.