

<b>Material Safety Data Sheet</b>	<b>p-Toluidine</b>
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<b>1 Product And Company Identification :</b>	
Product Name	: <b>p-Toluidine</b>
Other/Generic Names	: 4-Aminotoluene, 4-Methylaniline
CAS No.	: 106-49-0
Product use	: It can be used to manufacture pigment, dyestuffs, photographic chemicals, antioxidants, agricultural, pharmaceutical and rubber chemicals.
Supplier	Deepak Nitrite Ltd. Aaditya-I, National Highway No. 8, Chhani Road, Vadodara - 390 024, India Manufacturing facilities at : Vadodara, Roha, Taloja & Hyderabad. Contact no. : +91-9904406400
For Chemical Emergency	Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887

<b>2 Hazard Identification :</b>	
<b>GHS classification (Classification according to Regulation (EC) No 1272/2008)</b>	<b>Hazard statement (s)</b>
Health Hazards Category 3, Inhalation Category 3, Dermal Carcinogenicity Category 2	H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled. H351: Suspected of causing cancer. H319: Causes serious eye irritation.
<b>Flammability:</b> <b>Physical hazards:</b> Eye irritation, Category 2 Skin sensitization, Category 1	H317: May cause an allergic skin reaction. H400: Very toxic to aquatic life.
<b>EC classification (Classification according to Directive 67/548/EEC)</b>	
<b>T:</b> R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
<b>Xi;</b> R36 Carc.Cat.3; R40 R43	Irritating to eyes. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.
<b>N :</b> R50 Acute aquatic toxicity, Category 1	Very toxic to aquatic organisms.
<b>Hazard pictograms</b>	



Signal word

Warning

### 3 Composition / Information On Ingredients :

<b>Chemical formula</b>	: $\text{CH}_3\text{C}_6\text{H}_4\text{NH}_2$
<b>Common Name</b>	: p-Toluidine
<b>Synonyms</b>	: 4-Aminotoluene, 4-Methylaniline
<b>Molecular weight</b>	: 107.15 g/mol
<b>CAS No.</b>	: 106-49-0
<b>Index No.</b>	: 612-160-00-4
<b>UN No.</b>	: 3451
<b>EINECS No.</b>	: 203-403-1

### 4 First Aid Measures :

#### General advice

First aider needs to protect himself.

#### If inhaled

Fresh air. If breathing stops: immediately apply mechanical ventilation, if necessary oxygen mask. Immediately call in physician.

#### In case of skin contact

Wash off with plenty of water. Dab with polyethylene glycol 400. Immediately remove contaminated clothing. Call a physician immediately.

#### In case of eye contact

Rinse out with plenty of water. Call in ophthalmologist.

#### If swallowed

Give water to drink (two glasses at the most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible

**5 Fire Fighting Measures:**

**Suitable extinguishing media**

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

**Special protective equipment for fire-fighters**

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Fire may cause evolution of: nitrogen oxides

Combustible material, Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

**Further information**

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

**6 Accidental Release Measures :**

**Personal precautions**

Avoid substance contact. Avoid inhalation of dusts in all circumstances.

Ensure adequate ventilation.

**Environmental precautions**

Do not empty into drains.

**Methods and materials for containment and cleaning up**

Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

**7 Handling & Storage :**

**Handling**

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance.

**Storage**

Further information on storage conditions

Protected from light. Dry. Tightly closed. Keep in a well-ventilated place.

Keep locked up or in an area accessible only to qualified or authorised persons.

Store at +15°C to +25°C.

## 8 Exposure Control / Personal Protection :

### Personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

### Respiratory protection

required when dusts are generated.  
Recommended Filter type: Filter A-(P3)

### Hand protection

full contact:  
Hand protection  
Glove material: Nitrile rubber Glove thickness: 0,11 mm Break through time: > 480 min

### Eye protection

Safety glasses  
Protective suit  
Protective measures

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance. Work under hood. Do not inhale substance.

## 9 Physical And Chemical Properties :

Appearance	: solid
Colour	: white
Odour	: alcoholic
pH ( 1% Solution)	: (H <sub>2</sub> O, 20 °C) alkaline
Boiling Point/range	: 200 °C
Melting point	: 43 °C
Flash Point	: 87 °C
Autoignition temperature	: 480 °C
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Vapour Pressure	: 1.3 hPa (50 °C)
Density	: 1.05 g/cm <sup>3</sup> (20 °C)
Solubility water	: 7.5 g/l (20 °C)
Relative vapour density	: 3.9

**10 Stability And Reactivity :**

**Materials to avoid**

Nitrosing agents, nitrous acid, nitrites

**Condition to avoid**

Strong heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

**Hazardous decomposition products**

Fire may cause evolution of: nitrogen oxides  
Combustible material, Vapours are heavier than air and may spread along floors.  
Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

**Further information**

Sensitivity to light Sensitive to air. Heat-sensitive Forms explosive mixtures with air on intense heating.

**11 Toxicological Information :**

<b>Acute toxicity</b>	:	LD 50 oral LD50 rat 336 mg/kg LD 50 dermal LD50 rabbit 890 mg/kg
<b>RTECS#</b>	:	XU3150000
<b>Category of danger</b>	:	Toxic, irritant, carcinogenic, sensitizing, dangerous for the environment
<b>Health Warnings</b>	:	Liver, Kidney Effect potentiated by: ethanol
<b>Target organs</b>	:	Liver, Kidney
<b>Potential health effects</b>	:	Toxic by inhalation, in contact with skin and if swallowed Irritating to eyes.

**12 Ecological Information :**

Acute fish toxicity LC50	:	Species: Brachydanio rerio (zebra fish) Dose: 137 mg/l Exposure time: 48 h Method: OECD Test Guideline 203
Acute toxicity to aquatic invertebrates EC50	:	Species: Daphnia magna (Water flea) Dose: 0,12 mg/l Exposure time: 48 h (ECOTOX Database) Toxicity to bacteria MICROTOX-TEST EC50 Species: Photobacterium phosphoreum Dose: 4,27 mg/l Exposure time: 30 min (Lit.)
		WGK 2 water endangering

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### 13 Disposal Considerations :

#### Product

Chemicals must be disposed of in compliance with the respective national regulations

#### Packaging

Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

### 14 Transport Information :

**UN No. : 3451**

**Hazard Class : 6.1**

**Packing Group : II**

Declaration (railroad and road) ADR, RID

UN 3451 Toluidine, fest, 6.1, II

Declaration (transport by sea) IMDG-Code

UN 3451 TOLUIDINES, SOLID, 6.1, II

Declaration (transport by air) IATA-DGR

UN 3451 TOLUIDINES, SOLID, 6.1, II

### 15 Regulatory Information :

#### Safety Information according to GHS

#### Hazard Statement (s)

H301: Toxic if swallowed.  
H311: Toxic in contact with skin.  
H331: Toxic if inhaled.  
H351: Suspected of causing cancer.  
H319: Causes serious eye irritation.  
H317: May cause an allergic skin reaction.  
H400: Very toxic to aquatic life.

#### Precautionary Statement (s)

P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing.  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Danger

#### Signal Word

#### Hazard Pictogram(s):



**RTECS#**

: XU3150000

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### Labeling according to EC directives

<b>Hazard symbols</b>	:	
<b>Risk phrases</b>	:	R 23/24/25-36-40-43-50 Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes .Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Very toxic to aquatic organisms.
<b>Safety phrases</b>	:	S 28-36/37-45-61 After contact with skin, wash immediately with plenty of soap and water. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).Avoid release to the environment. Refer to special instructions/ Safety data sheets.

### OSHA Hazards

Combustible Liquid

### DSL Status

All components of this product are on the Canadian DSL list.

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Fire Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

2-Ethylhexyl nitrate CAS-No. 27247-96-7

### New Jersey Right To Know Components

2-Ethylhexyl nitrate CAS-No. 27247-96-7

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

### 16 Other Information:

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**DISCLAIMER** : Deepak Nitrite Ltd. provides the information contained herein in good faith but makes no representation as to comprehensiveness or accuracy. This document is only as a guide to a properly trained person, for the appropriate precautions and handling of the material. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. The data does not signify any warranty with regard to the product's properties.