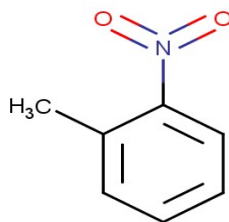


### 1. General Statement

2-Nitrotoluene or ortho-nitrotoluene is an organic compound. It is a pale yellow liquid. Mainly use a precursor to o-toluidine, which is an intermediate in the production of various dyes.

### 2. Chemical identity

Name : 2-nitrotoluene  
 CAS number(s) : 88-72-2  
 EC number : 201-853-3  
 Molecular formula : C<sub>7</sub>H<sub>7</sub>NO<sub>2</sub>  
 Structure :



### 3. Uses and Benefits

2-nitrotoluene used for the intermediates of dyes and pesticides, and also for the production of coatings, plastics and pharmaceuticals. 2-nitrotoluene is mainly used in the production of o-toluidine, o-tolidine, and also used as the important raw materials of dyes, paints, plastics and pharmaceuticals.

### 4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Yellow.
Odour :	Mild odour.
pH :	6 – 8
Melting point	-3.85 °C
Boiling point :	222 °C (1013 hPa)
Flash point :	95 °C (Closed cup, 1013 hPa)
Density :	1.16 g/cm <sup>3</sup>
Solubility Water:	0.044 g/100ml (20 °C)

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### 5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal )	Harmful if swallowed or if inhaled
Irritation / corrosion Skin / eye/ respiratory tract	NA
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	May cause genetic defects.
Carcinogenicity	It may cause cancer.
Toxicity for reproduction	Suspected of damaging fertility or the unborn child.

### 6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 7. Exposure

#### Human health

Substance may cause genetic defects, cancer and is suspected of damaging fertility.

The probability of exposure to workers is expected to be low because this product is manufactured in an enclosed controlled environment and is transported in well sealed containers. 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. Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

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### Environment

2-nitrotoluene is very toxic to aquatic life with long lasting effects. 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

Organizational	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.	
Protection	Eye protection:	Safety glasses
	Skin and body protection:	Wear suitable protective clothing
	Respiratory protection:	Wear a full face mask with filter type A at conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator
Engineering controls	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.	
Environment protective measures		
Products must not be released into water without pre-treatment. Neutralize wastewater before release.		

## 9. First-aid measures

**First-aid measures after inhalation** : Remove the person to fresh air and keep them comfortable for breathing. Call a poison center or a doctor if you feel unwell.

**First-aid measures after skin contact** : Wash skin with plenty of water.

**First-aid measures after eye contact** : Rinse eyes with water as a precaution.

**First-aid measures after ingestion** : Rinse mouth. Call a poison center or a doctor if you feel unwell.

## 10. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media:** Water spray. Dry powder. Foam. Carbon dioxide.

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**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 (nitrous vapours, carbon monoxide - carbon dioxide).

### **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** : Fight fire from safe distance and protected location. Do not enter a fire area without proper protective equipment, including respiratory protection.

## 11. Accidental release measures

**Protective equipment** : Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

**Environmental precautions**: Avoid release to the environment. Notify authorities if a product enters sewers or public waters.

**For containment** : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leaks without risks if possible.

## 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 an authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. 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** : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle it until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product in the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid breathing dust/fume/gas/mist/vapors/spray.

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**Hygiene measures** : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 14. Classification and Labeling

Hazard pictograms (GHS US)

:



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H302+H332 - Harmful if swallowed or if inhaled

H340 - May cause genetic defects.

H350 - May cause cancer.

H361 - Suspected of damaging fertility or the unborn child

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US)

: 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, vapors, spray.

P264 - Wash hands, forearms and face thoroughly after handling.

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

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P312 - Call a poison center or doctor if you feel unwell.

P330 - Rinse mouth.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 15. Conclusion

The substance may cause cancer , genetic defects and also it is suspected of damaging fertility .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.

### 16. Contact Information within company

#### **Manufacturer**

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## **GPS Safety Summary**

### **2-nitrotoluene**

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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.