



## Technical Data Sheet

### 3-Nitro-o-xylene

#### 1- Introduction

3-Nitro-o-xylene is a yellow coloured, clear liquid with characteristic odour. It is almost insoluble in water. It is stable under recommended storage conditions & decomposes on heating producing toxic fumes (nitrogen oxides). Keep away from oxidizing agents & ignition sources.

Product Name: - 3-Nitro-o-xylene

Synonyms: - 1, 2-Dimethyl-3-nitrobenzene; 3-Nitro-1, 2-dimethylbenzene;  
3-Nitro-o-xylene

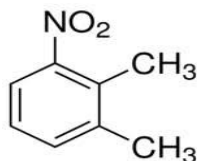
CAS No. 83-41-0

UN No. 3082

EINECS No. 201- 474 - 3

Mol. Formula: - C<sub>8</sub>H<sub>9</sub>NO<sub>2</sub>

Structural Formula:-



Mol. Weight: - 151.16



## 2- Physical Properties:

Sr. No.	Properties	3-Nitro-o-xylene
1-	Appearance	Clear liquid
2-	Colour	Yellow
3-	Odour	Characteristic odour.
4-	pH(1%Solution)	Not available
5-	Boiling Point/range	245 °C (473 °F) - lit.
6-	Melting point	7 - 9 °C (45 - 48 °F) - lit.
6-	Flash Point	107 °C (225 °F) - closed cup
7-	Auto ignition temperature	Not available
8-	Vapor Pressure	13 Pa at 25°C
9-	Density	1.129 g/cm <sup>3</sup> at 25 °C (77 °F)
10-	Solubility water	117 mg/L in water at 25 °C
11-	Decomposition	Decomposes on heating producing toxic fumes (nitrogen oxides)



### **3. Product Quality Specification:**

Sr. No.	Test Parameter	Specification
1-	Appearance	Yellowish to brownish colour, clear liquid.
2-	Purity (by GC )	98.5 % min
3-	4-Nitro-O-Xylene	0.4 % max
4-	Moisture (KF)	0.2 % Max

### **4. Packing Information:**

Sr. Number	Grade	Packing	Secondary Packing
1-	200 Kg capacity MS drum/ Tanker	200 kg of 3-Nitro-o-xylene packed in MS drum or in tanker.	-----

DNL can customize packing for different quantities.

### **5. PRODUCT USES:**

The nitrogen ion in nitro compounds is trigonally planar with 120° angles. There are two resonance bonds so that the two oxygens are equivalent. Nitro compounds are strongly basic due to electron withdrawing both inductively and mesomerically. Historically, they are abundant in dyes and explosives. Nitro compounds, organic hydrocarbons having one or more NO<sub>2</sub> groups bonded via nitrogen to the carbon framework, are versatile intermediate in organic synthesis.

- Michael addition
- Reduction
- Henry Reaction (Nitro-aldol reaction)
- Nef reaction
- O-Alkylation
- Cycloaddition



- Substitution, Elimination, Conversion reaction, Alkylation, Acylation, and Halogenation

### 1- In dyes and explosives chemicals manufacturing: -

It is used as an intermediate for manufacturing of dyes and explosives chemicals.


### 2- In agriculture: -

It is used as an intermediate for manufacturing of Agrochemicals.

### 3- In pharmaceutical :-

It is used as an intermediate for manufacturing of pharmaceutical products.

### 6. Regulatory Information:-

Particulars	Information	Pictogram
Hazard Class	6.1	
Label	Toxic	
		
Subsidiary Label	---	
UN Number	1665	
Proper shipping Name	3-Nitro-o-xylene	
Packing Group	II	

RTECS#: Data not available.



## **7. PRODUCT SAFETY INFORMATION:**

3-Nitro-o-xylene may irritate skin and eye. If inhaled may cause respiratory tract irritation & may be harmful if swallowed. It is stable under recommended storage conditions. Materials keep away from strong oxidizing agents & strong bases. Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>). As with any chemical, 3-Nitro-o-xylene requires care in handling. Anyone responsible for the procurement, use or disposal of this product should familiarize himself and those handling the product with the appropriate safety and handling precautions. This information is available in the Material Safety Data Sheet, which may be obtained by contacting our representative.

## **8. Manufacture Site:**

Deepak Nitrite Limited (APL Division)  
Plot No. 1 to 6, 26 to 31, MIDC Industrial Area, Dhatav, Roha,  
Dist. Raigad 402 116, Maharashtra.  
Phone No. 02194 263550/263750

## **9. Corporate Headquarter:**

Deepak Nitrite Ltd.  
Aaditya-I, National Highway No. 8, Chhani Road,  
Vadodara - 390 024,  
India  
Ph. No (0265) 2765200

## **10. 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



## **Disclaimer:**

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Deepak Nitrite Ltd

