



Technical Data Sheet

2, 4-Nitroxylene

1- Introduction

2, 4-Nitroxylene is a yellow to amber or deep yellow-green colour clear liquid and having characteristic odour. It is insoluble in water. It is stable under recommended storage conditions & decomposes on heating producing toxic fumes Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen. Keep away from oxidizing agents & ignition sources.

Product Name: - 2, 4-nitro xylene

Synonyms: - m-Xylene, 4-nitro-; 1-Nitro-2, 4-dimethylbenzene; 1, 3-Dimethyl-4-nitrobenzene; 2, 4-Dimethyl-1-nitrobenzene; 4-Nitro-m-xylene; 4-Nitro-1, 3-dimethylbenzene; 4-Nitro-1, 3-xylene; 2, 4-Dimethylnitrobenzene

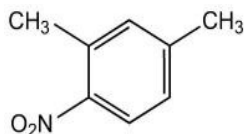
CAS No. 89-87-2

UN No. 1665

EINECS No. : 201-947-4

Mol. Formula: - $C_8H_9NO_2$

Structural Formula:-



Mol. Weight: - 151.16



2- Physical Properties:

| Sr. No. | Properties | 2, 4-nitro xylene |
|---------|---------------------------|---|
| 1- | Appearance | Clear liquid. |
| 2- | Colour | Yellow to amber or deep yellow-green colour. |
| 3- | Odour | Characteristic odour. |
| 4- | pH(1%Solution) | Data not available |
| 5- | Boiling Point/range | 244 °C @ 760.00 mm Hg |
| 6- | Melting point | 7 °C |
| 6- | Flash Point | 107 °C |
| 7- | Auto ignition temperature | Not available |
| 8- | Vapor Pressure | 1 mm Hg at 66 °C |
| 9- | Density | 1.131 g/cm ³ (20 °C) |
| 10- | Solubility water | Negligible |
| 11- | Decomposition | Decomposes on heating producing toxic fumes (Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen) |



3. Product Quality Specification:

| Sr. No. | Test Parameter | Specification |
|---------|----------------------|--|
| 1- | Appearance | Yellow to amber or deep yellow-green colour, clear liquid. |
| 2- | Purity (by GC) | 99.5 % min |
| 3- | 2,6 nitro xylene | 0.20 % max. |
| 4- | 2,3+3,5 nitro xylene | 0.40 % max. |

4. Packing Information:

| Sr. Number | Grade | Packing | Secondary Packing |
|------------|------------------------------|---|-------------------|
| 1- | 200 Kg in MS drum/ Tanker | 200 kg of 2, 6-nitro 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 NO₂ 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



Nitro compounds are readily reduced into amines when reacted with hydrochloric acid. Aromatic nitro compounds also yield anilines, aromatic amine compounds. Nitro compounds are cleaved into two parts by the addition of a molecule of water to produce carbonyl compounds (aldehydes or ketones). Aromatic nitro compounds undergo nucleophilic substitutions to be replaced by the hydroxide anion, resulting in the creation of phenol compounds and by alkoxy nucleophiles to corresponding ethers.

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 | Warning | |
| | |  |
| Subsidiary Label | --- | |
| UN Number | 1665 | |
| Proper shipping Name | 2, 4-nitro xylene | |
| Packing Group | II | |

RTECS#: Data not available



7. PRODUCT SAFETY INFORMATION:

2, 4-nitro 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_x). Stable under recommended storage conditions. Materials Separated from oxidizing agents. As with any chemical, 2, 4-nitro 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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