

Deepak Nitrite Limited

Material Safety Data Sheet	Ortho Nitro Toluene
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1 Product And Company Identification :	
Product Name	: Ortho Nitro Toluene
Other/ Generic Names	ONT, alpha-Methylnitrobenzene; 2-Nitrotoluene, o-nitrotoluol
CAS No.	: 88-72-2
Product use	o-Nitrotoluene is used for dyes, explosives, a variety of organic chemicals, including compounds used in the agricultural chemical, pesticide, petrochemical, pharmaceutical, and rubber industries.
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

2 Hazard Identification :	
GHS classification (Classification according to Regulation (EC) No 1272/2008)	Hazard statement (s)
Health Hazards 1 Physical Hazards 0	H350: May cause cancer. H340: May cause genetic defects. H361f: Suspected of damaging fertility. H302: Harmful if swallowed. H411: Toxic to aquatic life with long lasting effects.
EC classification (Classification according to Directive 67/548/EEC)	
T: R 45-46-22-51/53-62	May cause cancer. May cause heritable genetic damage. Also harmful if swallowed.
N: R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility.
Hazard pictograms	Toxic, Dangerous for the environment

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Signal word

Danger

3 Composition / Information On Ingredients :

Hazardous components	: Ortho Nitro Toluene
Chemical formula	: C ₇ H ₇ NO ₂
Common Name	ONT
Synonyms	: 1-Methyl-2-nitrobenzene, o-methylnitrobenzene, 1-methyl-2-nitrobenzene, 2-methylnitrobenzene, o-nitrotoluene, o-nitrotoluol, 2-nitrotoluol, 2-nitrophenylmethane, ONT
Molecular weight	: 137.14 g/mol
CAS No.	: 88-72-2
UN No.	: 1664
Index No.	EC Index No. 609-065-00-5
EINECS No.	: 201-853-3

4 First Aid Measures :

General advice :

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact :

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed :

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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5 Fire Fighting Measures :

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Fire Extinguishing Media : Dry chemical powder, chemical foam. Beware of formation of toxic fumes. Wear respiratory protection equipment. Do not allow contaminated extinguishing water to enter soil, ground water or surface waters.

6 Accidental Release Measures :

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Fill into labeled sealable containers.

Use necessary personal protective equipment when handling.

7 Handling & Storage :

Handling

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist.

Normal measures for preventive fire protection.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8 Exposure Control / Personal Protection :

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Hand protection: The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection: Safety glasses

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9 Physical and Chemical Properties :

Colour	:	clear, Yellow liquid
Odor	:	Aromatic
pH	:	6 - 8 (H ₂ O)
Boiling Point/range	:	225 °C
Melting /Freezing point	:	-4 - -3 °C
Vapour Density	:	4.72 (Air = 1)
Specific Gravity	:	1.3 at 20 °C (Water = 1)
Vapour pressure	:	0.16mbar @20 deg C
Flash point	:	95 °C - closed cup
Auto ignition temperature	:	305 deg C (581.00 deg F)
Water solubility at 20 °C	:	0.44 g/L (20°C)
Auto flammability (ignition temperature)	:	420 deg C (788.00 deg F)
Vapour density in relation to air (= 1)	:	4,73 - (Air = 1.0)
Density	:	1,163 g/ml at 25 °C
Decomposition	:	270 deg C Decomposes on heating producing toxic fumes (nitrogen oxides)
Solubility	:	Solubility in other solvents: soluble in alcohol, ether and benzene

10 Stability And Reactivity :

Storage stability: Stable under recommended storage conditions.

Materials to avoid: Oxidizing agents, Strong bases. Incompatible materials, reducing agents, strong bases, amines, alkalies.

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Incompatible materials, reducing agents, strong bases, amines, alkalies.

Hazardous Decomposition Products : Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization Will not occur.

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11 Toxicological Information :

Acute toxicity	: LD ₅₀ Oral - rat - 891 mg/kg Inhalation, mouse: LC ₅₀ = 328 mg/m ³ ; Inhalation, rat: LC ₅₀ = 790 mg/m ³ ; Oral, mouse: LD ₅₀ = 970 mg/kg; Oral, rabbit: LD ₅₀ = 1750 mg/kg;
RTECS#	: CAS No. 88-72-2 XT3150000
Chronic exposure	This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. IARC: Group 3 - Not classifiable as to carcinogenicity to humans (2-Nitrotoluene) May alter genetic material.
Signs and Symptoms of Exposure	Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Potential Health Effects	Inhalation : Toxic if inhaled. May cause respiratory tract irritation. Skin : Toxic if absorbed through skin. May cause skin irritation. Eyes : May cause eye irritation. Ingestion : Toxic if swallowed. Target Organs : Male reproductive system., Female reproductive system., Kidney, Spleen., Liver

12 Ecological Information :

Elimination information (persistence and degradability)

Not readily biodegradable. Log Pow: 2.3.

Ecotoxicity effects

Fish: Zebrafish: LC₅₀: 65mg/L; 96h; .

Fish: Leuciscus idus: LC₅₀: 25mg/L; 48h; .

Toxicity to daphnia and other aquatic invertebrates.

: EC₅₀ – Daphnia magna (Water flea) – 5.4 mg/l – 48 h

Further information on ecology

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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13 Disposal Considerations :

Examine possibilities for re-utilization. Package product wastes. Close and label waste containers. Dispose of these in accordance with the official regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers / packing material is passed on, the recipient must be warned of any possible hazard that may be caused by the residues. Observe all federal, state & local environmental regulations.

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14 Transport Information :

UN No. : 1664

Hazard Class : 6.1

Packing Group : II

Proper shipping name: NITROTOLUENES, LIQUID

Declaration (railroad and road) ADR, RID UN 1664 Nitrotoluene, flüssig, 6.1, II

Declaration (transport by sea) IMDG-Code UN 1664 NITROTOLUENES, LIQUID, 6.1, II

Declaration (transport by air) IATA-DGR UN 1664 NITROTOLUENES, LIQUID, 6.1, II

15 Regulatory Information :



Signal word: Danger

Symbols : T, N Toxic & Dangerous for the environment

Precautionary Statement

P201: Obtain special instructions before use.
P273: Avoid release to the environment.
P308 + P313: IF exposed or concerned: Get medical advice/ attention.

Contains

Ortho Nitro Toluene

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Risk Phrases:

R-phrase(s)

R45 May cause cancer.

R46 May cause heritable genetic damage.

R22 Also harmful if swallowed.

R62 Possible risk of impaired fertility.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic Environment

Safety Phrases :

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61 Avoid release to the environment. Refer to special

instructions/ Safety data sheets. Restricted to professional users.

Labeling according to EC Directives

EC Label

Hazard symbols

T Toxic

N Dangerous for the environment

WGK (Water Danger/Protection)

CAS# 88-72-2: 3

Canada

CAS# 88-72-2 is listed on Canada's DSL List

US Federal

TSCA

CAS# 88-72-2 is listed on the TSCA Inventory.

16 Other Information:

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 judgement in determining its appropriateness for a particular purpose. The data does not signify any warranty with regard to the product's properties.