OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

4-NITRO TOLUENE 98%

(For Synthesis)
(Para- Nitro Toluene)
MSDS CAS: 99-08-1

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: 4-NITRO TOLUENE
CAS#: 99-99-0
Synonym: p-nitro toluene, 1-Methyl-4-nitrobenzene
Chemical Name: 4-Nitro Toluene
Chemical Formula: C7H7NO2

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet :

Company identification: **OXFORD LAB FINE CHEM LLP**
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
4-Nitro Toluene	99-99-0	100

Section 3: Hazards Identification

Risk advice to man and the environment:
Toxic by inhalation, in contact with skin and if swallowed. Danger of cumulative effects. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 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. 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.

Section 5: Fire and Explosion Data

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.

Section 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.**

Section 7: Handling and Storage

Handling:
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

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

Section 8: Exposure Controls/Personal Protection

Personal protective equipment
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).**

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: **Face shield and 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.

Section 9: Physical and Chemical Properties

Appearance Form	**: Crystalline**
Molecular Weight	**: 137.14 g/mole**
Colour	**: Light yellow**
pH	**: No data available**

Section 9: Physical and Chemical Properties (Continued)

Melting point	**: 52-54 °C - lit.**
Boiling point	**: 238 °C - lit.**
Flash point	**: 106,00 °C - closed cup**
Ignition temperature	**: 390 °C**
Lower explosion limit	**: 1,6 %(V)**
Density	**: 1,157 g/mL at 25 °C**
Water solubility	**: No data available**
Relative vapour Density	**: 5.49**

Section 10: Stability and Reactivity Data

Storage stability: **Stable under recommended storage conditions.**

Materials to avoid: **Oxidizing agents, Strong bases**

Hazardous decomposition products:
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

Section 11: Toxicological Information

Acute toxicity: **LD50 Oral - rat - 1.960 mg/kg LCLO Inhalation - rat - 1 h - 4 ppm LC50 Inhalation - rat - 975 mg/m3 Remarks: Brain and Coverings: Recordings from specific areas of CNS. Liver: Fatty liver degeneration. Blood: Methemoglobinemia-Carboxyhemoglobin. LD50 Dermal - rat - > 16.000 mg/kg Remarks: Lungs, Thorax, or Respiration: Other changes. Liver: Fatty liver degeneration. Nutritional and Gross Metabolic: Weight loss or decreased weight gain.**

Irritation and corrosion: **No data available**

Sensitisation: **No data available**

Chronic exposure:
IARC: Group 3 - Not classifiable as to carcinogenicity to humans (4-Nitrotoluene)
Genotoxicity in vitro - Hamster - ovary
Sister chromatid exchange
Genotoxicity in vitro - rat - Liver
Unscheduled DNA synthesis

Section 11: Toxicological Information (Continued)

Genotoxicity in vitro - Hamster - ovary
Cytogenetic analysis
Genotoxicity in vitro -
Ames test - S. typhimurium
Reproductive toxicity - rat - Oral
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Paternal Effects:
Testes, epididymis, sperm duct.
Reproductive toxicity - rat - Intraperitoneal
Maternal Effects: Uterus, cervix, vagina.

Signs and Symptoms of Exposure: **Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, burning sensation, 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.**

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 **Blood, Central nervous system, Cardiovascular system., Skin,**

Section 12: Ecological Information

Elimination information (persistence and degradability): **Biodegradability**

Ecotoxicity effects: **Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 30 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates.**
EC50 - Daphnia magna (Water flea) - 7,4 mg/l - 48 h
Toxicity to algae Growth inhibition EC50 - Chlorella pyrenoidosa - 14 mg/l - 96 h

Further information on ecology: **Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**

Section 13: Disposal Considerations

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.**

Section 14: Transport Information

Land transport (ADR-RID)
Proper shipping name: NITROTOLUENES, SOLID
UN N°: 3446
H.I. nr: 60
ADR - Class: 6.1
Labelling - Transport: 6.1 : Toxic substances.
ADR - Group: II

Sea transport (IMDG) [English only]
Proper shipping name: NITROTOLUENES, SOLID
UN N°: 3446
IMO-IMDG - Class or division: 6.1 : Toxic substances.
IMO-IMDG - Packing group: II

Air transport (ICAO-IATA) [English only]
Proper shipping name: NITROTOLUENES, SOLID
UN N°: 3446
IATA - Class or division: 6.1 : Toxic substances.
IATA - Packing group: II

Section 15: Other Regulatory Information

Labelling according to EC Directives
Hazard symbols: T Toxic

R-phrase(s):
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

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Section 15: Other Regulatory Information (Continued)

R33 Danger of cumulative effects.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s):
S28 After contact with skin, wash immediately with plenty of soap and water.
S37 Wear suitable gloves.
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.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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