Central Pollution Control Board
Ministry of Environment & Forests, Govt of India, Parivesh Bhawan, East Arjun Nagar, Delhi - 110032

MATERIAL SAFETY DATA SHEETS

440 o-Nitrotoluene

1. CHEMICAL IDENTITY

Chemical Name : o-Nitrotoluene

Chemical Classification: Toxic **Trade Name :**

Synonyms: 2-Methylnitrobenzene, Methylnitrobenzene, 1-Methyl-2-nitrobenzene, 2-Nitrotoluene

Formula : C7H7NO2 **CAS No:** 88-72-2 **UN No:** 1664

Regulated Identification

Shipping Name : Nirotoluene **Hazchem Code :** 2X

Codes / Label : Class 6.1, Toxic **Hazardous Waste ID No :** 17

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 o-Nitrotoluene	88-72-2	3	
2		4	

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 222 **Physical State:** Liquid **Appearance:** Light yellow oily liquid

Melting Pt °C: -9.5 **Vapour Pressure @ 35°C mmHg:** 0.188 mm Hg @ 25 deg C **Odour:** Weak aromatic

Vapour Density(Air =1): 4.73 **Solubility in water at 30°C g/100ml:** 650 mg/L @ 30 deg C **Others:** Miscible with alcohol, benzene. ether. slightly soluble in NH3.

Specific Gravity (Water =1): 1.1622 @ 19 deg C/15 deg C **pH :**

3. FIRE / EXPLOSION HAZARD DATA

Flammability : **LEL:** 2.2 **Flash Point °C in OC:** 106

TDG Flammability: **UEL:** 7.6 **Flash Point °C in CC:** 95

Autoignition Temperature °C : 420

Explosion sensitivity to impact: Stable

Explosion sensitivity to static Electricity: Stable

Hazardous Combustion Products : Emits highly toxic fumes of NOx.

Hazardous Polymerization : Will not occur.

Combustible Liquid: Yes **Explosive Material:** No **Corrosive Material** No

Flammable Material: No **Oxidiser :** No **Others:**

Pyrophoric Material: No **Organic Peroxide :** No

4. REACTIVITY DATA

Chemical Stability : Stable under normal temperatures and pressures.

Incompatibility with other material : Oxidizing agents

Reactivity : Reacts explosively with alkalies (eg. sodium hydroxide).

Hazardous Reaction Products : Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, skin, eyes, ingestion

Effects of Exposure / Symptoms:

Inhalation : May be fatal if inhaled. Causes respiratory tract irritation. Aspiration may cause respiratory swelling and pneumonitis. Ingestion: Aspiration hazard. May be harmful if swallowed. Causes digestive tract irritation. Skin : Causes mild skin irritation. Eye: Causes mild eye irritation.

Emergency Treatment :

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Do not use mouth-to-mouth respiration.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

LD50 (oral-rat) mg/kg:	891 mg/kg	**STEL:**	
LC50 (rat) mg/kg:		**Odour Threshold:**	0.05 ppm (0.25 mg/m3)
Permissible Exposure Limit:	5 ppm (30 mg/m3)	**TLV (ACGIH) :**	2 ppm, skin

NFPA Hazard Signals	Health	Flammability	Reactivity	Special
	3	1	1	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Avoid contact with liquid or vapour. Provide self-contained breathing apparatus, full body protective overclothing butyl rubber hand gloves, shoes, side covered safety goggles/face shield.

Handling : Wash thoroughly after handling. Use only in a well ventilated area. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale.

Storage : Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Precautions : Eyes: Wear appropriate protective eyeglasses or chemical safety goggles. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure.

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Dry chemical powder, foam, water and CO2.

Special Procedure : Keep the containers cool by spraying water if exposed to heat or flame.

Unusual Hazards : Poisonous gases is produced in fire.

EXPOSURE: First Aid Measures:

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Do not use mouth-to-mouth respiration.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes

while removing contaminated clothing and shoes. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Antidotes / Dosages:

SPILLS :

Steps To Be Taken : Shut off leaks if without risk. Contain the leakage on earth or sand.

Waste Disposal Method: Seal all the waste in vapour tight plastic bags for eventual disposal.

8. ADDITIONAL INFORMATION / REFERENCES

Melting point: -9.5 deg C (needles); -2.9 deg C (crystals)
Combustible when exposed to heat and open flames.

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :
MAILING ADDRESS :
TELEPHONE / TELEX NOS :
TELEGRAPHIC ADDRESS :
OTHERS :

Contact person in Emergency :
Local Bodies involved :
Standard Packing :
Trem Card Details / Ref :

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