OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

N,N,DIETHYLANILINE 98.5%

(For Synthesis)

MSDS CAS: 91-66-7

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: N,N,DIETHYLANILINE
CAS#: 91-66-7
Synonym: Diethylphenylamine
Chemical Name: N,N,Diethylaniline
Chemical Formula: $C_{10}H_{15}N$

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
Tel/Fax: 91-250-2390032

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS NO.	% by Weight
{n,n-}Diethylaniline	91-66-7	100

Toxicological Data on Ingredients: n,n-Diethylaniline: ORAL (LD50): Acute: 610 mg/kg [Rat]. VAPOR (LC50): Acute: 314.6 ppm 4 hour(s) [Rat].

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Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, liver, spleen, upper respiratory tract, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

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Section 4: First Aid Measures (Continued)

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: **Not available.**

Section 5: Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 332°C (629.6°F)

Flash Points: CLOSED CUP: 85°C (185°F).

Flammable Limits: Not available.

Products of Combustion:
These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of heat, of oxidizing materials, of acids.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

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Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment if ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Section 8: Exposure Controls/Personal Protection (Continued)

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 2 (ppm) from ACGIH (TLV) TWA: 5 (ppm) from OSHA (PEL) Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance:	**Liquid.**
Odor	**: Not available.**
Taste	**: Not available.**
Molecular Weight	**: 149.24 g/mole**
Color	**: Yellow. (Light.)**
pH (1% soln/water)	**: Not available.**
Boiling Point	**: 216°C (420.8°F)**
Melting Point	**: -38°C (-36.4°F)**
Critical Temperature	**: Not available.**
Specific Gravity	**: 0.9302 (Water = 1)**
Vapor Pressure	**: Not available.**
Vapor Density	**: 1 (Air = 1)**
Volatility	**: Not available.**
Odor Threshold	**: Not available.**
Water/Oil Dist. Coeff.	**: Not available.**
Ionicity (in Water)	**: Not available.**
Dispersion Properties	**: Very slightly dispersed in methanol, n-octanol. See solubility in water.**
Solubility	**: Partially soluble in cold water. Very slightly soluble in methanol, diethyl Ether, n-octanol, acetone.**

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Section 10: Stability and Reactivity Data

Stability: **The product is stable.**

Instability Temperature: **Not available.**

Conditions of Instability: **Not available.**

Incompatibility with various substances: **Not available.**

Corrosivity: **Not available.**

Special Remarks on Reactivity: **Not available.**

Special Remarks on Corrosivity: **Not available.**

Polymerization: **No.**

Section 11: Toxicological Information

Routes of Entry: **Absorbed through skin. Eye contact. Inhalation. Ingestion.**

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 610 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 314.6 ppm 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. The substance is toxic to blood, liver, spleen, upper respiratory tract, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: **Not available.**

Special Remarks on Chronic Effects on Humans: **Not available.**

Special Remarks on other Toxic Effects on Humans: **Not available.**

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Section 12: Ecological Information

Ecotoxicity: **Not available.**

BOD5 and COD: **Not available.**

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:
The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: **Not Available.**

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping name: **N,N-DIETHYLANILINE**
UN N°: **2432**
H.I. nr: **60**
ADR - Class: **6.1**
Labelling - Transport: **6.1 : Toxic substances.**
ADR - Group: **III**

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Section 14: Transport Information (Continued)

Sea transport (IMDG) [English only]

Proper shipping name: N,N-DIETHYLANILINE
UN N°: 2432
IMO-IMDG - Class or division: 6.1 : Toxic substances.
IMO-IMDG - Packing group: III

Air transport (ICAO-IATA) [English only]

Proper shipping name: N,N-DIETHYLANILINE
UN N°: 2432
IATA - Class or division: 6.1 : Toxic substances.
IATA - Packing group: III

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: n,n-Diethylaniline Pennsylvania RTK: n,n-Diethylaniline Florida: n,n-Diethylaniline Minnesota: n,n-Diethylaniline Massachusetts RTK: n,n-Diethylaniline New Jersey: n,n-Diethylaniline TSCA 8(b) inventory: n,n-Diethylaniline CERCLA: Hazardous substances.: n,n-Diethylaniline: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:
WHMIS (Canada): CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
DSCL (EEC): R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R33- Danger of cumulative effects. R51/53- Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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Section 15: Other Regulatory Information (Continued)

HMIS (U.S.A.):
Health Hazard: 2
Fire Hazard: 2
Reactivity: 0
Personal Protection: h

National Fire Protection Association (U.S.A.):
Health: 2
Flammability: 2
Reactivity: 0
Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

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