OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

N,N,N',N'-TETRAMETHYL ETHYLENE DIAMINE AR (TEMED)

MSDS CAS: 110-18-9

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: N,N,N,N-TETRA METHYL ETHYLENE DIAMINE AR (TEMED)
CAS#: 110-18-9
Synonym: Not available.
Chemical Name: Not available.
Chemical Formula: C6H16N2

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,
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Tel: 91-250-2390989
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{N,N,N',N'-} Tetramethylenediamine	110-18-9	99%

Toxicological Data on Ingredients: N,N,N',N'-Tetramethylenediamine: ORAL (LD50): Acute: 1020 mg/kg [Rat]. 630 mg/kg [Mouse]. DERMAL (LD50): Acute: 5390 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Extremely hazardous in case of eye contact (irritant), of ingestion. Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive, permeator), of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Extremely hazardous in case of eye contact (irritant), of ingestion. Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive, permeator), of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

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:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands: 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. 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. Seek medical attention.

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: **Flammable.**
Auto-Ignition Temperature: **Not available.**
Flash Points: **CLOSED CUP: 17.22°C (63°F).**
Flammable Limits: **Not available.**
Products of Combustion: **These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).**
Fire Hazards in Presence of Various Substances: **Flammable in presence of open flames and sparks.**

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:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: **Not available.**
Special Remarks on Explosion Hazards: **Not available.**

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.

Section 6: Accidental Release Measures (Continued)

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.

Section 7: Handling and Storage

Precautions:

Keep container dry. 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. Never add water to this product 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. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

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.

Personal Protection:

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

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust 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: **Not available.**

Section 9: Physical and Chemical Properties

Physical state and appearance:	**Liquid.**
Odor:	**Amine like.**
Taste:	**Not available.**
Molecular Weight:	**116.21 g/mole**
Color:	**Colorless to light yellow.**
pH (1% soln/water):	**Not available.**
Boiling Point:	**121.5°C (250.7°F)**
Melting Point:	**-55°C (-67°F)**
Critical Temperature:	**Not available.**
Specific Gravity:	**0.7765 (Water = 1)**
Vapor Pressure:	**10 mm of Hg (@ 20°C)**
Vapor Density:	**4 (Air = 1)**
Volatility:	**100% (v/v).**
Odor Threshold:	**Not available.**
Dispersion Properties:	**See solubility in water.**
Solubility:	**Water: Soluble in water.**

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: **Non-corrosive in presence of glass.**

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

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

Polymerization: **No.**

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 630 mg/kg [Mouse]. Acute dermal toxicity (LD50): 5390 mg/kg [Rabbit].

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:
Extremely hazardous in case of ingestion. Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (corrosive, permeator), of inhalation.

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.

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 more toxic.

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	**: 1, 2-DI-(DIMETHYLAMINO) ETHANE**
UN N°	**: 2372**
H.I. nr	**: 33**
ADR – Class	**: 3**
Labelling – Transport	**: 3: Flammable liquid.**

Sea transport (IMDG) [English only]

Proper shipping name	**: 1, 2-DI-(DIMETHYLAMINO) ETHANE**
UN N°	**: 2372**
IMO-IMDG - Class or division	**: 3: Flammable liquid.**
IMO-IMDG - Packing group	**: II**

Air transport (ICAO-IATA) [English only]

Proper shipping name	**: 1, 2-DI-(DIMETHYLAMINO) ETHANE**
UN N°	**: 2372**
IATA - Class or division	**: 3: Flammable liquid.**
IATA - Packing group	**: II**

Section 15: Other Regulatory Information

Federal and State Regulations: **TSCA 8(b) inventory: N,N,N',N'-Tetramethylenediamine**

Other Regulations: **OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).**

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R11- Highly flammable. R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes.

Section 15: Other Regulatory Information (Continued)

HMIS (U.S.A.):
Health Hazard: 3
Fire Hazard: 3
Reactivity: 0
Personal Protection: h

National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 3
Reactivity: 0
Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

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