MO2

Issued: 26/02/02 Revision No: 1

Danum Laboratory Services

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Rossington

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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: MO2

CAS number: 100-97-0 EINECS number: 202-905-8 Product code: RD2006

Synonyms: HEXAMETHYLENETRIAMINE

Use / description of product: Highly flammable. Irritant.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient 1: HEXAMINE >90%

CAS: 100-97-0 EINECS: 202-905-8 [F] R11; [Sens.] R42/43;

Contains: Contains N,N-Diethyl-p-Phenylene Diamine Sulphate

3. HAZARDS IDENTIFICATION

Main hazards: Highly flammable. Irritating to eyes, respiratory system and skin. May cause sensitisation

by inhalation and skin contact.

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: Irritation or pain may occur at the site of contact. Severe burns may occur.

Eye contact: There may be irritation and redness. There may be severe pain. Corneal burns may

occur. The vision may become blurred.

Ingestion: Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.

There may be mental confusion. There may be loss of consciousness. Convulsions may

occur.

Inhalation: There may be shortness of breath with a burning sensation in the throat. There may be

nausea, thirst, a high temperature and sweating. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness. Convulsions

may occur.

4. FIRST AID MEASURES (ACTION)

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.

Drench the affected skin with running water for 10 minutes or longer if substance is still

on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist

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examination.

Ingestion: Do not induce vomiting. If conscious, give 1 pint of water to drink immediately. If

unconscious, check for breathing and apply artificial respiration if necessary. If

unconscious and breathing is OK, place in the recovery position. Transfer to hospital

as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If

unconscious, check for breathing and apply artificial respiration if necessary. If

unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and

provide oxygen if available. Transfer to hospital as soon as possible.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Carbon dioxide. Alcohol or polymer foam. Dry chemical powder. Water spray.

Exposure hazards: Highly flammable. In combustion emits toxic fumes of hydrogen cyanide.

Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact

with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Mark out the contaminated area with signs and prevent access to unauthorised

personnel. Eliminate all sources of ignition. Do not create dust.

Environmental precautions: Do not discharge into drains or rivers.

Clean-up procedures: Cover with sodium bisulphite solution using starch iodide paper to test for complete

reduction. If inside, transfer outside of building in suitable containers. Wash down the

drain with large amounts of water.

7. HANDLING AND STORAGE

Handling requirements: Ensure there is sufficient ventilation of the area. Avoid direct contact with the

substance. Smoking is forbidden.

Storage conditions: Store in cool, well ventilated area. Keep away from sources of ignition. Keep container

tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves.

Eye protection: Safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Protective clothing with elasticated cuffs and closed neck. Boots made of PVC. PVC

apron covering the tops of the boots. Ensure safety shower is to hand.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Solid Colour: White

Odour: Sweet-smelling

Oxidising: Non-oxidising (by EC criteria)

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Solubility in water: Soluble

Boiling point/range°C: 280

Flash point°C: 250 cc

Autoflammability°C: 410

Relative density: 1.27

pH: 8-8.5

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Heat. Sources of ignition.

Materials to avoid: Water. Acids. Oxidising agents.

Haz. decomp. products: In combustion emits toxic fumes of hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Routes of exposure May cause sensitisation by inhalation. May cause sensitisation by skin contact.

12. ECOLOGICAL INFORMATION

Mobility: Soluble in water.

13. DISPOSAL CONSIDERATIONS

Waste disposal: Arrange for collection by specialised disposal company.

Disposal of packaging Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations

regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

UN no: 1328

ADR Class: 4.1

Hazard ID no: 40

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Labelling: 4.1

Shipping name: HEXAMETHYLENETRIAMINE

IMDG / IMO

UN no: 1328

Class: 4.1

Packing group: III

EmS: 4.1-06

Marine pollutant: NO

Labelling: 4 FLAMMABLE SOLID

IATA / ICAO

UN no: 1328

Class: 4.1

Packing group: III

Packing instructions: 420

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Quantity 100 kg

Labelling: 4 FLAMMABLE SOLID

15. REGULATORY INFORMATION

Hazard symbols: Highly flammable.

Irritant.

Risk phrases: R11: Highly flammable.

 $R36/37/38 \colon Irritating to eyes, respiratory system and skin.$

R42/43: May cause sensitisation by inhalation and skin contact.

Safety phrases: S16: Keep away from sources of ignition - No smoking.

S22: Do not breathe dust.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

Note: The regulatory information given above only indicates the principal regulations

specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or

provisions.

16. ADDITIONAL INFORMATION

Risk phrases used in s.2: R11: Highly flammable.

R42/43: May cause sensitisation by inhalation and skin contact.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive

and shall be used only as a guide. This company shall not be held liable for any damage

resulting from handling or from contact with the above product.