



## MATERIAL SAFETY DATA SHEETS

209

Dimethyl nitrosamine

### 1. CHEMICAL IDENTITY

**Chemical Name :** Dimethyl nitrosamine

**Chemical Classification:** Toxic

**Trade Name :**

**Synonyms:** Nitrosodimethylamine, N-N-Dimethylnitrosamine, DMN

**Formula :** C<sub>2</sub>H<sub>6</sub>N<sub>2</sub>O

**CAS No:** 62-75-9

**UN No:** 2810

### Regulated Identification

**Shipping Name :**

**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 Dimethyl nitrosamine	62-75-9	3	
2		4	

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 151-153

**Physical State:** Liquid

**Appearance:** Yellow oily liquid

**Melting Pt °C:** -28

**Vapour Pressure @ 35°C mmHg:** 2.7 mm Hg at 20 deg C

**Odour:** Faint characteristic odour, amine.

**Vapour Density(Air =1):** 2.56

**Solubility in water at 30°C g/100ml:** Miscible

**Others:** Soluble in all common organic solvents and in lipids.

**Specific Gravity (Water =1 ):** 1.0048 AT 20 deg C/4 deg C

**pH :** Alkaline

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** No

**LEL:**

**Flash Point °C in OC:**

**TDG Flammability:**

**UEL:**

**Flash Point °C in CC:**

**Autoignition Temperature °C :**

**Explosion sensitivity to impact:** Stable

**Explosion sensitivity to static Electricity:** Stable

**Hazardous Combustion Products :** Emits highly toxic fumes of NO<sub>x</sub>.

**Hazardous Polymerization :** Will not occur.

**Combustible Liquid:** No

**Explosive Material:** No

**Corrosive Material** No

**Flammable Material:** No

**Oxidiser :** No

**Others:**

**Pyrophoric Material:** No

**Organic Peroxide :** No

### 4. REACTIVITY DATA

**Chemical Stability :** Stable

**Incompatibility with other material :** Strong Oxidisers.

**Reactivity :** Reacts with oxidisers.

**Hazardous Reaction Products :**

## 5. HEALTH HAZARD DATA

**Routes of entry:** Inhalation, Ingestion, Skin & Eyes.

### Effects of Exposure / Symptoms:

Inhalation & Ingestion: Causes systemic effects, bleeding of ulcers from small intestine, nausea, vomiting and fever. Has caused fatal liver disease in humans.

### Emergency Treatment :

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

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

**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. Induce vomiting only when instructed to do so by a physician.

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<b>LD50 (oral-rat) mg/kg:</b> 27-41 mg/kg	<b>STEL:</b>
<b>LC50 (rat) mg/kg:</b> 78 ppm/4 hr	<b>Odour Threshold:</b>
<b>Permissible Exposure Limit:</b>	<b>TLV (ACGIH) :</b>

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<b>NFPA Hazard</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Special</b>
<b>Signals</b>	3	2	0	

## 6. PREVENTIVE MEASURES

**Personal Protective Equipment :** Provide self-contained breathing apparatus, side covered safety goggles, face shield, protective overclothing, rubber hand gloves and shoes.

**Handling :** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapour), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale. Store protected from light. Use only in a chemical fume hood. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage :** Keep away from sources of ignition. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

**Precautions :** Avoid contact with liquid or vapour.

## 7. EMERGENCY / FIRST AID MEASURES

### FIRE:

**Fire Extinguishing Media :** To extinguish fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

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

**Unusual Hazards :** Poisonous gases are produced in fire.

### EXPOSURE: First Aid Measures:

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If

breathing is difficult, give oxygen. Do not use mouth-to-mouth respiration.

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

**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. Induce vomiting only when instructed to do so by a physician.

#### **Antidotes / Dosages:**

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#### **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**

A suspected human carcinogen.

#### **9. MANUFACTURERS / SUPPLIERS DATA**

<b>NAME OF FIRM :</b>	<b>Contact person</b>
<b>MAILING ADDRESS :</b>	<b>in Emergency :</b>
<b>TELEPHONE / TELEX NOS :</b>	<b>Local Bodies involved :</b>
<b>TELEGRAPHIC ADDRESS :</b>	<b>Standard Packing :</b>
<b>OTHERS :</b>	<b>Trem Card Details / Ref :</b>

#### **10. DISCLAIMER**

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