

## **MATERIAL SAFETY DATA SHEET**

### **PARALDEHYDE**

**(For Synthesis)**

**MSDS CAS: 123-63-7**

## **Section 1: Chemical Product and Company Identification**

### **Section 1: Chemical Product**

**Product Name: PARALDEHYDE**

**CAS#: 123-63-7**

**Synonym: 2,4,6-Trimethyl-1,3,5-trioxane**

**Chemical Name: Not Available.**

**Chemical Formula: C<sub>6</sub>H<sub>12</sub>O<sub>3</sub>**

**Brand: OXFORD**

### **Details Of The Supplier Of The Safety Data Sheet:**

#### **Company identification:**

**OXFORD LAB FINE CHEM LLP**

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**Mumbai, Maharashtra, INDIA.**

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## **Section 2: Composition and Information on Ingredients**

### **Composition:**

Substance name	CAS #	% by Weight
Paraldehyde	123-63-7	100

**Toxicological Data on Ingredients: Paraldehyde: ORAL (LD50): Acute: 1530 mg/kg [Rat]. DERMAL (LD50): Acute: 14000 mg/kg [Rabbit].**

## Section 3: Hazards Identification

### Potential Acute Health Effects:

Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant), of eye contact (irritant).

### Potential Chronic Health Effects:

Very hazardous in case of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to kidneys, lungs, the nervous system, liver, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

## 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. Seek medical attention.

### 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:** 238°C (460.4°F)

**Flash Points:** CLOSED CUP: 36°C (96.8°F).

**Flammable Limits:** LOWER: 1.3%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Extremely explosive in presence of open flames and sparks.

**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. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosion.

**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.

**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 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 keep away from incompatibles such as oxidizing agents, alkalis.

### 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 : Aromatic. (Strong.)

Taste : Strong.

Molecular Weight : 132.16 g/mole

## Section 9: Physical and Chemical Properties (Continued)

<b>Color</b>	: Not available.
<b>pH (1% soln/water)</b>	: Not available.
<b>Boiling Point</b>	: 124°C (255.2°F)
<b>Melting Point</b>	: 12°C (53.6°F)
<b>Critical Temperature</b>	: Not available.
<b>Specific Gravity</b>	: 0.996 (Water = 1)
<b>Vapor Pressure</b>	: 25.3 mm of Hg (@ 20°C)
<b>Vapor Density</b>	: 4.5 (Air = 1)
<b>Volatility</b>	: Not available.
<b>Odor Threshold</b>	: Not available.
<b>Water/Oil Dist. Coeff.</b>	: Not available.
<b>Ionicity (in Water)</b>	: Not available
<b>Dispersion Properties</b>	: See solubility in water, methanol, diethyl ether, and acetone.
<b>Solubility</b> cold water.	: Easily soluble in methanol, diethyl ether, and acetone. Partially soluble in cold 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:** Highly reactive with oxidizing agents, alkalis.

**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:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

Acute oral toxicity (LD50): 1530 mg/kg [Rat]. Acute dermal toxicity (LD50): 14000 mg/kg [Rabbit].

**Chronic Effects on Humans:**

The substance is toxic to kidneys, lungs, the nervous system, liver, mucous membranes.

**Other Toxic Effects on Humans:**

Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (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.

## 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: PARALDEHYDE

UN N°: 1264

H.I. nr: 30

ADR - Class: 3

Labelling - Transport: 3 : Flammable liquid

ADR - Group: III

### Sea transport (IMDG) [English only]

Proper shipping name: PARALDEHYDE

UN N°: 1264

IMO-IMDG - Class or division: 3 : Flammable liquid explosives.

IMO-IMDG - Packing group: III

### Air transport (ICAO-IATA) [English only]

Proper shipping name: PARALDEHYDE

UN N°: 1264

IATA - Class or division: 3 : Flammable liquid

IATA - Packing group: III

## Section 15: Other Regulatory Information

### Federal and State Regulations:

Pennsylvania RTK: Paraldehyde Massachusetts RTK: Paraldehyde TSCA 8(b) inventory: Paraldehyde  
SARA 313 toxic chemical notification and release reporting: Paraldehyde CERCLA: Hazardous substances.:  
Paraldehyde

### 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): R10- Flammable. R22- Harmful if swallowed. R36/38- Irritating to eyes and skin.

## **Section 15: Other Regulatory Information (Continued)**

**HMIS (U.S.A.):**

**Health Hazard: 2**

**Fire Hazard: 3**

**Reactivity: 0**

**Personal Protection: H**

**National Fire Protection Association (U.S.A.):**

**Health: 3**

**Flammability: 2**

**Reactivity: 1**

**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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