

## **MATERIAL SAFETY DATA SHEET**

### **ISO-BUTYRALDEHYDE**

**(For Synthesis)**

**(2-Methyl Propanol)**

**MSDS CAS: 78-84-2**

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

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

**Product Name: ISO-BUTYRALDEHYDE**

**CAS#: 78-84-2**

**Synonym: 2-Methylpropionaldehyde, 2-methyl propanol**

**Chemical Name: ISO-Butyraldehyde**

**Chemical Formula: C<sub>4</sub>H<sub>8</sub>O**

**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 #	% by Weight
ISO-Butyraldehyde	78-84-2	100

## Section 3: Hazards Identification

**Risk advice to man and the environment:** Highly flammable.

## Section 4: First Aid Measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:**

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Flush eyes with water as a precaution.

**If swallowed:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## Section 5: Fire and Explosion Data

**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Special protective equipment for fire-fighters:**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information:** Use water spray to cool unopened containers.

## Section 6: Accidental Release Measures

**Personal precautions:**

Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

## Section 6: Accidental Release Measures (Continued)

### Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods for cleaning up:

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## Section 7: Handling and Storage

### Handling:

Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

### Storage:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: 2 - 8 °C.

## Section 8: Exposure Controls/Personal Protection

### Personal protective equipment

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection:

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

**Eye protection:** Face shield and safety glasses

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

## Section 8: Exposure Controls/Personal Protection (Continued)

### Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## Section 9: Physical and Chemical Properties

Appearance Form	: Clear, Liquid
Colour	: Colourless
Odour	: Unpleasant
pH	: No Data Available
Molecular Weight	: 72.11 g/mole
Melting point	: -65 °C - lit.
Boiling point	: 63 °C - lit.
Flash point	: -19 °C - closed cup
Ignition temperature	: 190 °C
Lower explosion limit	: 1,6 %(V)
Upper explosion limit	: 11 %(V)
Vapour pressure	: 88 hPa at 4,4 °C
Density	: 0,79 g/mL at 25 °C
Water solubility	: No Data Available
Partition coefficient	: n-octanol/water log Pow: 0,77
Relative vapour Density:	2,49- (Air = 1.0)

## Section 10: Stability and Reactivity Data

Storage stability: Stable under recommended storage conditions.

Conditions to avoid: Heat, flames and sparks.

Materials to avoid: Oxidizing agents, Strong acids, Strong bases, And Strong Reducing Agents.

### Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## Section 11: Toxicological Information

### Acute toxicity:

LD50 Oral - rat - > 3.000 mg/kg

LC50 Inhalation - rat - 4 h - > 23.900 mg/m<sup>3</sup>

LD50 Dermal - rabbit - > 5.000 mg/kg

### Irritation and corrosion:

Skin - rabbit - No skin irritation

Eyes - rabbit - No eye irritation

Sensitisation: No data available

### Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity - rat - Inhalation

Maternal Effects: Other effects.

### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

## Section 12: Ecological Information

Elimination information (persistence and degradability): Biodegradability

### Ecotoxicity effects

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 86 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - Daphnia magna (Water flea) - 277 mg/l - 48 h

Further information on ecology: No data available.

## Section 13: Disposal Considerations

**Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

## Section 14: Transport Information

### Land transport (ADR-RID)

**Proper shipping name:** ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)

**UN N°:** 2045

**H.I. nr:** 33

**ADR - Class:** 3

**Labelling - Transport:** 3 : Flammable liquid

**ADR - Group:** II

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

**Proper shipping name:** ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)

**UN N°:** 2045

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

**IMO-IMDG - Packing group:** II

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

**Proper shipping name:** ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)

**UN N°:** 2045

**IATA - Class or division:** 3 : Flammable liquid.

**IATA - Packing group:** II

## Section 15: Other Regulatory Information

### Labelling according to EC Directives

**Hazard symbols:** Xi Irritant

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**Email:** sales@oxfordlabchem.com /  
info@oxfordlabchem.com  
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## **Section 15: Other Regulatory Information (Continued)**

**R-phrase(s):**

**R36/37/38 Irritating to eyes, respiratory system and skin.**

**S-phrase(s):**

**S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.**

**S36 Wear suitable protective clothing.**

## **Section 16 - Additional Information**

**References:** Not available.

**Other Special Considerations:** Not available.

### ***Disclaimer:***

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