

## **MATERIAL SAFETY DATA SHEET**

### **DIACETONE ALCOHOL (For Synthesis) (4-Hydroxy-4-Methyl Pentan-2-One) MSDS CAS: 123-42-2**

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

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

**Product Name:** DIACETONE ALCOHOL

**CAS#:** 123-42-2

**Synonym:** 4-Hydroxy-4-methyl pentan-2-one

**Chemical Name:** Diacetone Alcohol

**Chemical Formula:**  $(CH_3)_2C(OH)CH_2COCH_3$

**Brand:** OXFORD

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

**Company identification:**      **OXFORD LAB FINE CHEM LLP**  
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#### **Section 2: Composition and Information on Ingredients**

##### **Composition:**

| Name              | CAS NO.  | % by Weight |
|-------------------|----------|-------------|
| Diacetone Alcohol | 123-42-2 | 100         |

**Toxicological Data on Ingredients:** Diacetone alcohol: ORAL (LD50): Acute: 4000 mg/kg [Rat]. 3959 mg/kg [Mouse]. DERMAL (LD50): Acute: 13500 mg/kg [Rabbit].

## Section 3: Hazards Identification

### Potential Acute Health Effects:

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

### Potential Chronic Health Effects:

**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.

## 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 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. 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:** Combustible.

**Auto-Ignition Temperature:** 643°C (1189.4°F)

**Flash Points:** CLOSED CUP: 56°C (132.8°F). (TAG) OPEN CUP: 61°C (141.8°F) (TAG).

**Flammable Limits:** LOWER: 1.8% UPPER: 6.9%

**Products of Combustion:**

These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Not available.

**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:**

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**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:**

Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## 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.

### 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. Keep container dry. Keep in a cool place.

## 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. Vapor 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:

TWA: 50 CEIL: 75 (ppm) from ACGIH (TLV) [1995] TWA: 238 CEIL: 360 (mg/m3) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

|                               |                                 |
|-------------------------------|---------------------------------|
| <b>Odor</b>                   | : Not available.                |
| <b>Taste</b>                  | : Not available.                |
| <b>Molecular Weight</b>       | : 116.16 g/mole                 |
| <b>Color</b>                  | : Not available.                |
| <b>pH (1% soln/water)</b>     | : Not available.                |
| <b>Boiling Point</b>          | : 167.9°C (334.2°F)             |
| <b>Melting Point</b>          | : -44°C (-47.2°F)               |
| <b>Critical Temperature</b>   | : Not applicable.               |
| <b>Specific Gravity</b>       | : 0.9387 (Water = 1)            |
| <b>Vapor Pressure</b>         | : 0.97 mm of Hg (@ 20°C)        |
| <b>Vapor Density</b>          | : 4.01 (Air = 1)                |
| <b>Volatility</b>             | : Not available.                |
| <b>Odor Threshold</b>         | : 0.27 ppm                      |
| <b>Water/Oil Dist. Coeff.</b> | : Not available.                |
| <b>Ionicity (in Water)</b>    | : Not available.                |
| <b>Dispersion Properties</b>  | : See solubility in water.      |
| <b>Solubility</b>             | : Easily 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:** 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:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

Acute oral toxicity (LD50): 3959 mg/kg [Mouse]. Acute dermal toxicity (LD50): 13500 mg/kg [Rabbit].

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

**Other Toxic Effects on Humans:** Slightly hazardous in case of ingestion, 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:** DIACETONE ALCOHOL  
**UN N°:** 1148  
**H.I. nr:** 30  
**ADR - Class:** 3  
**Labelling - Transport:** 3 : Flammable liquid.  
**ADR - Group:** III

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

**Proper shipping name:** DIACETONE ALCOHOL  
**UN N°:** 1148  
**IMO-IMDG - Class or division:** 3 : Flammable liquid.  
**IMO-IMDG - Packing group:** III

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

**Proper shipping name:** DIACETONE ALCOHOL  
**UN N°:** 1148  
**IATA - Class or division:** 3 : Flammable liquid.  
**IATA - Packing group:** III

## Section 15: Other Regulatory Information

### Federal and State Regulations:

**Pennsylvania RTK:** Diacetone alcohol  
**Massachusetts RTK:** Diacetone alcohol  
**TSCA 8(b) inventory:** Diacetone alcohol

### Other Regulations:

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

## Section 15: Other Regulatory Information (Continued)

### Other Classifications:

**WHMIS (Canada):** CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):** R36/38- Irritating to eyes and skin.

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

**Health Hazard:** 1

**Fire Hazard:** 2

**Reactivity:** 0

**Personal Protection:** h

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

**Health:** 1

**Flammability:** 2

**Reactivity:** 0

**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.



# OXFORD LAB FINE CHEM LLP

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