

# OXFORD LAB FINE CHEM LLP

ISO 9001-2008 Certified Company

**Regd Office:** Unit no 12, 1st Floor,  
Neminath Industrial Estate No.6,  
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## MATERIAL SAFETY DATA SHEET

### ACETYL ACETONE 98%

(For Synthesis)

MSDS CAS: 123-54-6

## Section 1: Chemical Product and Company Identification

### Section 1: Chemical Product

**Product Name:** ACETYL ACETONE 98%

**CAS#:** 123-54-6

**Synonym:** Acetoacetone; diacetylmethane; 2,4-pentanedione

**Chemical Name:**

**Chemical Formula:** CH<sub>3</sub>COCH<sub>2</sub>COCH<sub>3</sub>

**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	Hazardous
Acetyl Acetone	123-54-6	90 - 100%	Yes

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## Section 3: Hazards Identification

### Emergency Overview

**WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.**

**(tm) SAF-T-DATA Ratings (Provided here for your convenience)**

**Health Rating: 2 - Moderate (Poison)**

**Flammability Rating: 2 - Moderate**

**Reactivity Rating: 1 - Slight**

**Contact Rating: 3 - Severe**

**Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER**

**Storage Color Code: Red (Flammable)**

### Potential Health Effects

2,4-Pentanedione produces a clinically, anatomically, and morphologically distinct neurotoxic response which differs from that produced by the other ketones. (Patty, et al)

### Inhalation:

Inhalation of vapors produces a narcotic effect. Symptoms of exposure may include drowsiness and irritation of the respiratory passages. Greater exposure may cause headache, dizziness, nausea, vomiting, and loss of consciousness.

### Ingestion:

Symptoms may include irritation to the gastrointestinal tract and other symptoms paralleling inhalation exposure. May produce irreversible neurological impairment and possibly death.

### Skin Contact:

Causes irritation. May be absorbed through the intact skin in harmful amounts.

### Eye Contact:

Vapors are irritating to the eyes. Splashes are severely irritating with pain, redness.

### Chronic Exposure:

Repeated exposure to low concentrations may be cumulative.

### Aggravation of Pre-existing Conditions:

Persons with pre-existing neurological disorders may be more susceptible to the effects of the substance.

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**Oxford**  
Range of  
Laboratory Chemicals

## Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:** Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:**

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Wash clothes before reuse. Get medical attention if irritation develops or persists.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## Section 5: Fire and Explosion Data

**Fire:**

Flash point: 34C (93F) CC

Autoignition temperature: 335C (635F)

Flammable limits in air % by volume:

l<sub>el</sub>: 2.4; u<sub>el</sub>: 11.6

Flammable Liquid and Vapor!

**Explosion:**

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

**Fire Extinguishing Media:**

Dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of heat and ignition.

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## Section 6: Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

## Section 7: Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

## Section 8: Exposure Controls/Personal Protection

### Airborne Exposure Limits:

None established.

### Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

### Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

### Skin Protection:

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure.

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

### Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Colorless to yellowish liquid.

<b>Odor</b>	: Pleasant odor.
<b>Taste</b>	: Not available
<b>Molecular Weight</b>	: 120.16 g/mole.
<b>Color</b>	: Colorless
<b>pH (1% soln/water)</b>	: Not available
<b>Boiling Point</b>	: 140C (284F)
<b>Melting Point</b>	: -23C (-9F)
<b>Specific Gravity</b>	: 1.03 (Water = 1)
<b>Vapor Pressure</b>	: 7.0 @ 20C (68F)
<b>Vapor Density</b>	: 0.975 @20/20C (68F)
<b>Volatility</b>	: 100.
<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>	: Not available.
<b>Solubility</b>	: Soluble in water, 12% w/w

## Section 10: Stability and Reactivity Data

**Stability** : Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:** Carbon dioxide and carbon monoxide may form when heated to decomposition.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Oxidizing agents, zinc, copper, nickel and related alloys.

**Conditions to Avoid:** Heat, flame, ignition sources, air, light and incompatibles.

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## Section 11: Toxicological Information

Oral rat LD50: 55 mg/kg; skin rabbit LD50: 810 mg/kg; Irritation skin rabbit 488 mg open: mildly irritating; irritation eye rabbit 20 mg: severely irritating; inhalation rat LCLo: 1000 ppm/4H; investigated as a mutagen, reproductive effector.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
2,4-Pentanedione (123-54-6)	No	No	None

## Section 12: Ecological Information

### Environmental Fate:

When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may biodegrade to a moderate extent. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition. When released into air, this material is expected to have a half-life between 10 and 30 days.

### Environmental Toxicity:

96 Hr LC50 Pimephales promelas: 104 mg/L [flow-through];  
96 Hr LC50 Lepomis macrochirus: 29 mg/L;  
48 Hr EC50 Daphnia magna: 34.4 mg/L.

## Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## Section 14: Transport Information

### Land transport (ADR-RID)

**Proper shipping name :** PENTANE-2,4-DIONE

**UN N° :** 2310

**H.I. nr :** 36

**ADR - Class :** 3

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

**Proper shipping name :** PENTANE-2,4-DIONE

**UN N° :** 2310

**IMO-IMDG - Class or division :** 3 : Flammable liquid. ( 6.1 : Toxic substances. )

**IMO-IMDG - Packing group :** III

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

**Proper shipping name :** PENTANE-2,4-DIONE

**UN N° :** 2310

**IATA- Class or division :** 3 : Flammable liquid. ( 6.1 : Toxic substances. )

**IATA- Packing group :** III

## Section 15: Other Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
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2,4-Pentanedione (123-54-6)	Yes	Yes	Yes	Yes
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-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient	Korea	DSL	NDSL	Phil.
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## Section 15: Other Regulatory Information (Continued)

2,4-Pentanedione (123-54-6)                      Yes    Yes    No    Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA

313-----

**Ingredient**    **RQ TPQ List Chemical Catg.**

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2,4-Pentanedione (123-54-6)                      No    No    No    No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-

**Ingredient**    **CERCLA 261.33 8(d)**

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2,4-Pentanedione (123-54-6)                      No    No    No

**Chemical Weapons Convention:** No **TSCA 12(b):** Yes **CDTA:** Yes

**SARA 311/312:** Acute: Yes **Chronic:** Yes **Fire:** Yes **Pressure:** No

**Reactivity:** No (Pure / Liquid)

## Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.



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