

 <p>CHEMLABS Quality Our Forte</p>	<p>LEONID CHEMICALS PVT. LTD., BANGALORE</p> <p>An ISO-9001:2008 Certified Company</p> <p>Quality Assurance Department</p>	<p>(CODE) DOCUMENT : WI (CODE) SECTION : WI/SM (DATE) : 01.04.2011</p>	 <p>Issue : 02 Rev.: 00</p>
<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ACETYL ACETONE</p>			<p>1 Page of 1</p>

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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Product name :
Acetyl Acetone

Product Number :
A089

Synonyms:
2,4-Pentanedione

Company Information:

LEONID CHEMICALS Pvt Ltd,
62/A2,1st Stage,
Yeshvanthpur Industrial Suburb,
Asoka puram School Road,
Bangalore -22, Karnataka, INDIA
Ph- +91-80-23378354
Fax: +918023378354/23377126

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2. COMPOSITION, INFORMATION ON INGREDIENTS

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CAS # : 123-54-6
Chemical Name : Acetyl Acetone
% : Min 98%
EINECS# : 204-634-0
Index # : 606-029-00-0

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3. HAZARDS IDENTIFICATION

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Classification of the substance or mixture
 Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
 Flammable liquids (Category 3)
 Acute toxicity, Oral (Category 4)
 Classification according to EU Directives 67/548/EEC or 1999/45/EC
 Flammable. Harmful if swallowed.

Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]
 Pictogram
 Signal word Warning
 Hazard statement(s)
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 Precautionary statement(s) none
 Supplemental Hazard Statements
 none
 According to European Directive 67/548/EEC as amended.
 Hazard symbol(s)
 R-phrase(s)
 R10 Flammable.
 R22 Harmful if swallowed.
 S-phrase(s)
 S21 When using do not smoke.
 S23 Do not breathe gas/fumes/vapour/spray.
 S24/25 Avoid contact with skin and eyes.
 Other hazards - none

4. FIRST AID MEASURES

Description of 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

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Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

Consult a physician.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed
no data available

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5. FIRE-FIGHTING MEASURES

Extinguishing media

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 hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

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

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Methods and materials for containment and cleaning up
 Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections
 For disposal see section 13.

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7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
 Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

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.

Specific end uses
 no data available

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested

and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

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

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type

of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with

multi-purpose combination (US) or type ABEK (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).

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- a) Appearance Form: liquid
- b) Odour: no data available
- c) Odour Threshold: no data available
- d) pH: 6 at 200 g/l at 20 °C
- e) Melting point/freezing point Melting point/range: -23 °C - lit.
- f) Initial boiling point and boiling range: 135.5 °C
- g) Flash point: 38 °C - closed cup
- h) Evaporation rate: no data available
- i) Flammability (solid, gas): no data available
- j) Upper/lower flammability or explosive limits
Upper explosion limit: 11.4 %(V)
Lower explosion limit: 1.7 %(V)
- k) Vapour pressure: no data available
- l) Vapour density: 3.46 - (Air = 1.0)
- m) Relative density: 0.973 g/mL

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- n) Water solubility: soluble
- o) Partition coefficient: noctanol/water
log Pow: 1,9
- p) Autoignition temperature: no data available
- q) Decomposition temperature : no data available
- r) Viscosity: no data available
- s) Explosive properties: no data available
- t) Oxidizing properties: no data available

Other safety information

Surface tension 31.2 mN/m at 20 °C

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10. STABILITY AND REACTIVITY
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Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents, Reducing agents, Strong bases, Metals

Hazardous decomposition products

Other decomposition products - no data available

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11. TOXICOLOGICAL INFORMATION
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Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 55 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Rigidity (includes catalepsy).

LD50 Dermal - rabbit - 787 mg/kg

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Skin corrosion/irritation

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.
Genotoxicity in vitro - Hamster - ovary
Mutation in mammalian somatic cells.
Genotoxicity in vivo - rat - Inhalation
Dominant lethal test
Carcinogenicity
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
Laboratory experiments have shown teratogenic effects.
Developmental Toxicity - rat - Inhalation
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion Toxic if swallowed.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes Causes eye burns.

Additional Information
RTECS: SA1925000

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12. ECOLOGICAL INFORMATION

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Toxicity

Toxicity to fish LC50 - other fish - 106 mg/l - 96 h
 Toxicity to daphnia and other aquatic invertebrates.
 EC50 - Daphnia magna (Water flea) - 40 mg/l - 24 h
 EC100 - Daphnia magna (Water flea) - 90 mg/l - 24 h
 LC50 - Daphnia magna (Water flea) - 34.409 µg/l - 48 h

Persistence and degradability
 no data available

Bioaccumulative potential
 no data available

Mobility in soil
 no data available

Results of PBT and vPvB assessment
 no data available

Other adverse effects
 no data available

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13. DISPOSAL CONSIDERATIONS

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Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

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14. TRANSPORT INFORMATION

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UN number

ADR/RID: 2310 IMDG: 2310 IATA: 2310

UN proper shipping name

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ADR/RID: PENTANE-2,4-DIONE

IMDG: PENTANE-2,4-DIONE

IATA: Pentane-2,4-dione

Transport hazard class(es)

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

no data available

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15. REGULATORY INFORMATION

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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

Chemical Safety Assessment

no data available

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16. ADDITIONAL INFORMATION

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Leonid Chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.

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Specification manual - Acetyl acetone

$C_5H_8O_2$

Mol Wt: 100.12

Product : Acetyl acetone LR
Description : Clear colourless liquid with camphor-like odour
Cat No : A089
Cas No : 123-54-6
Prepared Date : 07.03-2005
Approved Date : 07.03-2005

REVISION HISTORY			
Issue/Rev	Description of Change	Author	Effective Date
01/00	Initial Release	S. Paul Joshua	07.03.2005
02/00	Reviewed no changes	S. Paul Joshua	01.04.2011
Next Review Due :	02.04.2015		
To be reviewed by :	Head-QC/QA		

Sl. No.	Tests	Specification
		LR
1	Assay (GC)	Min 98.0%
2	Water	1%
3	Density	0.973 g/ml
4	Boiling point	135.5°C

Approved By: S.Paul Joshua, Head Quality Control and Quality Assurance