

 <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</p> <p>(CODE) SECTION : WI/SM</p> <p>(DATE) : 01.04.2011</p>	 <p>Issue : 02</p> <p>Rev.: 00</p>
<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>1 Page of 1</p>

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:
Ethyl acetoacetate

Cat No.:
E011

Synonyms:
Acetoacetic ester

CAS-No. :
141-97-9

Company Information:

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

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
 Eye irritation (Category 2)
Classification according to EU Directives 67/548/EEC or 1999/45/EC
 Irritating to eyes.
Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
 Pictogram
 Signal word Warning
 Hazard statement(s)
 H319 Causes serious eye irritation.
 Precautionary statement(s)

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>2 Page of 1</p>

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard

Statements

none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

R-phrases(s)

R36 Irritating to eyes.

S-phrases(s)

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

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: $C_6H_{10}O_3$

Molecular Weight: 130.14 g/mol

CAS-No.: 141-97-9

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

Wash off with soap and plenty of water. 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

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

Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>3 Page of 1</p>

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. 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.

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).

Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

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.

Specific end uses

no data available

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>4 Page of 1</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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. 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.

Body Protection

impervious 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

- Appearance Form: liquid
- Odour: no data available
- Odour Threshold: no data available
- pH: no data available
- Melting point/freezing point
Melting point/range: -43 °C - lit.
- Initial boiling point and boiling range: 181 °C - lit.
- Flash point: 85 °C - closed cup

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>5 Page of 1</p>

- h) Evaporation rate: no data available
- i) Flammability (solid, gas): no data available
- j) Upper/lower flammability or explosive limits
Upper explosion limit: 9.5 %(V)
Lower explosion limit: 1.4 %(V)
- k) Vapour pressure: 1 hPa at 28.5 °C
- l) Vapour density: 4.49 - (Air = 1.0)
- m) Relative density: 1.029 g/mL at 20 °C
- n) Water solubility: no data available
- o) Partition coefficient: noctanol/water: no data available
- 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: no data available

10. STABILITY AND REACTIVITY

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

acids, Bases, Oxidizing agents, Reducing agents

Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 3.980 mg/kg

Skin corrosion/irritation

Skin - rabbit - Open irritation test

Serious eye damage/eye irritation

Eyes - rabbit - Moderate eye irritation - 24 h

Respiratory or skin sensitization

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>6 Page of 1</p>

no data available

Germ cell mutagenicity

no data available

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

no data available

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 May be harmful if swallowed.

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

Eyes Causes serious eye irritation.

Signs and Symptoms of Exposure

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

Additional Information

RTECS: AK5250000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - > 100 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 646 mg/l - 48 h

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h

Persistence and degradability

Biodegradability Result: - Readily biodegradable.

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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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>7 Page of 1</p>

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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.

14. TRANSPORT INFORMATION

UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packaging group

ADR/RID: - IMDG: - IATA: -

Environmental hazards

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

Special precautions for user

no data available

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Further information

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

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<p>Title: MATERIAL SAFETY DATA SHEET (MSDS): ETHYL ACETOACETATE</p>			<p>8 Page of 1</p>

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		Title: SPECIFICATION MANUAL - ETHYL ACETOACETATE	

Specification manual - Ethyl Acetoacetate

C₆H₁₀O₃

Mol Wt: 130.14

Product : Ethyl Acetoacetate LR
Description : Clear liquid
Cat No : E011
Cas No : 141-97-9
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	Protocol
		LR	
1	Assay (GC)	Min 97%	2/4/03
2	Boiling range	179-181°C	2/3.1-03

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