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SAFETY DATA SHEET

ETHYL ACETOACETATE

SECTION 1: Identification of the substance/mixture and of the company/undertaking Trade name:

1.1 Product identifier:	
CAS Number:	141-97-9
EC number:	205-500-4.
1.2 SYNONYMS	• Ethyl 3-oxobutanoate • Ethyl acetylacetate • Ethyl 2-oxopropionate • Acetoacetic acid ethyl ester • Ethyl acetoacetate ester

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
2.2 Label elements:	Labelling according to Regulation (EC) No 1272/2008 Eye irritation(category 2) Skin irritation (category 2) Specific Target Organ Toxicity - Single Exposure(category 3)
Hazard Pictograms:	
Signal Word:	Danger
Hazard statements:	**H226:** Flammable liquid and vapour. **H315:** Causes skin irritation. **H319:** Causes serious eye irritation**.** **H335:** May cause respiratory irritation**.**
Precautionary Statements:	**P210:** Keep away from heat, sparks, open flames, and hot surfaces. — No smoking. **P233:** Keep container tightly closed. **P261:** Avoid breathing dust/fume/gas/mist/vapours/spray.

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	P280: Wear protective gloves/protective clothing/eye protection/face protection. **P304+P340:** IF INHALED: Remove person to fresh air and keep comfortable for breathing. **P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do — continue rinsing.
Environmental statements	**H412:** Harmful to aquatic life with long-lasting effects
2.3 Other hazards:	
Inhalation:	May cause irritation to the respiratory tract, leading to coughing throat irritation.
Ingestion:	can lead to symptoms such as nausea, vomiting, abdominal pain, and diarrhea.
Skin Contact:	repeated skin contact can cause irritation, leading to symptoms such as redness, itching, and dryness.
Eye contact:	May cause irritation, redness, pain and burning sensation.
Chronic Exposure:	Prolonged or repeated skin contact may cause dermatitis.
Aggravation of pre-existing conditions	Individuals with asthma, chronic bronchitis, or other pulmonary disorders may experience worsened symptoms causing diseases and worse case organ damage.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description: 141-97-9 ETHYL ACETOACETATE
Identification number(s):	EC number: 205-500-4

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SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician
After skin contact:	Flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
After swallowing:	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
4.2 Most important symptoms and effects, both acute and delayed	Acute symptoms include eye and skin irritation, respiratory discomfort. If delayed effects may involve chronic respiratory issues and dermatitis from prolonged exposure.
4.3 Indication of any immediate medical attention and special treatment needed	Immediate medical attention is needed when exposed.

SECTION 5: Firefighting measures

5.1 Extinguishing media	Use water spray, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture	include the potential release of toxic gases (carbon monoxide, carbon dioxide) upon combustion, irritating dust or vapors, and the risk of environmental damage due to its acidic nature.

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5.3 Advice for firefighters	Wear fully protective suit, safety glasses and respiratory device .
5.4 further information	No data available

SECTION 6: Accidental release measures

6.1 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. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations.
6.2 Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and material for containment and cleaning up:	Use non-combustible absorbents like sand, vermiculite, or diatomaceous earth to absorb small quantities, then dispose of the absorbent in an approved waste container. according to local regulations

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Keep away from heat, sparks, and flame
7.2 Conditions for safe storage, including any incompatibilities	Dedicated tank and keep cool Ventilate far way from fire heat and sunlight. keep temp below 40C with several extinguish facilities. Do not keep it with oxidant or acidity substance or relevant hazards
Requirements to be met by storerooms and receptacles:	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
7.3 Specific end uses	No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	A system of local and general exhaust is recommended
8.2 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:	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
General protective and hygienic measures:	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	Respiratory protection: Required.
Protection of hands:	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
	Eye protection: Required
Protection of Body:	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.
Other protection:	Smoking is forbidden in workplaces. Attention should be paid to personal hygiene

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	liquid
Colour:	colourless
Odour:	Pleasant, mild odour
pH-value:	No data available
Melting point/Melting range:	-54°C
Boiling point/Boiling range:	181°C
Flammability (solid, gaseous):	non-flammable
Ignition temperature:	295°C (approx.)
Decomposition temperature:	Not determined
Self-igniting:	Not determined
Flash point:	84°C
Danger of explosion:	Not determined
Explosion limits: Lower:	1.7%
Explosion limits: Upper:	11.3%
Vapour pressure:	0.8 mmHg. At 20°C
Density at 20 °C:	1.020 g/cm^3**.**
Relative density:	1.02
Vapour density:	4.2
Evaporation rate:	Not determined
Solubility in / Miscibility with-water at 20 °C:	Limited solubility
Partition coefficient:(n-octanol/water)	1.29
Viscosity:	0.6cP

SECTION 10: Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable at room temperature
10.3 Possibility of hazardous reactions	may undergo hazardous reactions with strong acids, bases, and oxidizing agents, potentially leading to the formation of reactive enolate ions, hydrolysis, exothermic reactions, or the release of toxic fumes upon decomposition.
10.4 Conditions to avoid	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode

	if exposed to heat. Keep out of water supplies and sewers.
10.5 Incompatible materials:	Acids, bases, oxidizing agents, reducing agents.
10.6 Hazardous decomposition products	Carbon dioxide, carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	**LD50/LC50**: Draize test, rabbit, eye: 100 mg Severe; Draize test, rabbit, eye: 100 mg/24H Moderate; Oral, mouse: **LD50** = 5105 mg/kg; Oral, rat: **LD50** = 3980 mg/kg
Germ cell mutagenicity:	no data available
Carcinogenicity:	Not listed by ACGIH, IARC, NTP, or CA Prop 65.
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
Signs and Symptoms of Exposure:	Always have on hand on first-aid kit, together with proper instructions
11.2 Additional toxicological information	
Aquatic Toxicity:	Fish: 96 Hr **LC50** Pimephales promelas: 298 mg/L; 96 Hr **LC50** Oncorhynchus mykiss: 290 mg/L; 96 Hr **LC50** Lepomis macrochirus: 307 mg/L Algae: 72 Hr **EC50** Desmodesmus subspicatus: >500 mg/L Invertebrate:24 Hr **EC50** Daphnia magna: 790 mg/L [Static]; 48 Hr

	EC50 Daphnia magna: 646 mg/L.
Biodegradability:	moderate biodegradable

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging: **Recommendation:**	Should be thoroughly cleaned, neutralized if necessary and disposed of or recycled according to local environmental and safety regulations to prevent contamination.
Recommended cleansing agents:	Water, sodium bicarbonate, dilute sodium hydroxide or lime, mild detergent solutions, isopropyl alcohol.

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	No data available
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	No data available
14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	No data available
14.4 Packing group · ADR, IMDG, IATA:	No data available
14.5 Environmental hazards:	No data available
14.6 Special precautions for user	No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture **Directive 2012/18/EU**	Directive 2012/18/EU, under that this substance is not classified under harmful substances.
Named dangerous substances	ANNEX I Substance is not listed
15.2 Chemical safety assessment	Chemical assessment has not been carried out

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SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.