

## SAFETY DATA SHEET

### ETHYL ACETOACETATE

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

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| <b>1.1 Product identifier:</b> |  |
| <b>CAS Number:</b>             | 141-97-9   |
| <b>EC number:</b>              | 205-500-4.   |
| <b>1.2 SYNONYMS</b>            | <ul style="list-style-type: none"> <li>• Ethyl 3-oxobutanoate</li> <li>• Ethyl acetylacetate</li> <li>• Ethyl 2-oxopropionate</li> <li>• Acetoacetic acid ethyl ester</li> <li>• Ethyl acetoacetate ester</li> </ul> |

#### SECTION 2: Hazards identification:

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| <b>2.1 Classification of the substance or mixture:</b> | Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.  |
| <b>2.2 Label elements:</b>                             | Labelling according to Regulation (EC) No 1272/2008<br>Eye irritation(category 2)<br>Skin irritation (category 2)<br>Specific Target Organ Toxicity - Single Exposure(category 3)  |
| <b>Hazard Pictograms:</b>                              |    |
| <b>Signal Word:</b>                                    | Danger   |
| <b>Hazard statements:</b>                              | <b>H226:</b> Flammable liquid and vapour.<br><b>H315:</b> Causes skin irritation.<br><b>H319:</b> Causes serious eye irritation.<br><b>H335:</b> May cause respiratory irritation.   |
| <b>Precautionary Statements:</b>                       | <b>P210:</b> Keep away from heat, sparks, open flames, and hot surfaces. — No smoking.<br><b>P233:</b> Keep container tightly closed.<br><b>P261:</b> Avoid breathing dust/fume/gas/mist/vapours/spray.  |
|  | <b>P280:</b> Wear protective gloves/protective clothing/eye protection/face protection.<br><b>P304+P340:</b> IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br><b>P305+P351+P338:</b> IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do — continue rinsing. |

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| <b>Environmental statements</b>               | <b>H412:</b> Harmful to aquatic life with long-lasting effects   |
| <b>2.3 Other hazards:</b>                     |  |
| <b>Inhalation:</b>                            | May cause irritation to the respiratory tract, leading to coughing throat irritation.  |
| <b>Ingestion:</b>                             | can lead to symptoms such as nausea, vomiting, abdominal pain, and diarrhea.   |
| <b>Skin Contact:</b>                          | repeated skin contact can cause irritation, leading to symptoms such as redness, itching, and dryness.   |
| <b>Eye contact:</b>                           | May cause irritation, redness, pain and burning sensation.   |
| <b>Chronic Exposure:</b>                      | Prolonged or repeated skin contact may cause dermatitis.   |
| <b>Aggravation of pre-existing conditions</b> | 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

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

### SECTION 4: First aid measures

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| <b>4.1 Description of first aid measures</b>                           |   |
| <b>General information:</b>  |   |
| <b>After inhalation:</b>   | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician  |
| <b>After skin contact:</b>   | Flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse                  |
| <b>After eye contact:</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.   |
| <b>After swallowing:</b>   | 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.               |
| <b>4.2 Most important symptoms and effects, both acute and delayed</b> | Acute symptoms include eye and skin irritation, respiratory discomfort. If delayed effects may involve chronic respiratory issues and dermatitis from prolonged exposure. |

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| <b>4.3 Indication of any immediate medical attention and special treatment needed</b> | Immediate medical attention is needed when exposed. |
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## SECTION 5: Firefighting measures

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| <b>5.1 Extinguishing media</b>                                   | Use water spray, dry chemical or carbon dioxide.  |
| <b>5.2 Special hazards arising from the substance or mixture</b> | 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. |
| <b>5.3 Advice for firefighters</b>                               | Wear fully protective suit, safety glasses and respiratory device.  |
| <b>5.4 further information</b>                                   | No data available   |

## SECTION 6: Accidental release measures

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| <b>6.1 Personal precautions, protective equipment and emergency procedures</b> | 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. |
| <b>6.2 Environmental precautions:</b>  | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  |
| <b>6.3 Methods and material for containment and cleaning up:</b>               | 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

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| <b>7.1 Precautions for safe handling</b>                                | 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  |
| <b>7.2 Conditions for safe storage, including any incompatibilities</b> | 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 |
| <b>Requirements to be met by storerooms and receptacles:</b>            | Keep container tightly closed in a dry and well-ventilated place.  |

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|                              | Containers which are opened must be carefully resealed and kept upright to prevent leakage |
| <b>7.3 Specific end uses</b> | No data available  |

## SECTION 8: Exposure controls/personal protection

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| <b>8.1 Control parameters</b>                                       |   |
| <b>Additional information about design of technical facilities:</b> | A system of local and general exhaust is recommended  |
| <b>8.2 Exposure controls</b>  |   |
| <b>Appropriate engineering controls</b>                             | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.  |
| <b>Personal protective equipment:</b>                               | Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.  |
| <b>General protective and hygienic measures:</b>                    | Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.  |
|   | Respiratory protection: Required.   |
| <b>Protection of hands:</b>   | 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  |
| <b>Protection of Body:</b>  | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.   |
| <b>Other protection:</b>  | Smoking is forbidden in workplaces. Attention should be paid to personal hygiene  |

## SECTION 9: Physical and chemical properties

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| <b>9.1 Information on basic physical and chemical properties</b> |                      |
| <b>General Information</b>                                       |                      |
| <b>Appearance: Form:</b>   | liquid               |
| <b>Colour:</b>   | colourless           |
| <b>Odour:</b>  | Pleasant, mild odour |
| <b>pH-value:</b>   | No data available    |
| <b>Melting point/Melting range:</b>                              | -54°C                |
| <b>Boiling point/Boiling range:</b>                              | 181°C                |
| <b>Flammability (solid, gaseous):</b>                            | non-flammable        |
| <b>Ignition temperature:</b>                                     | 295°C (approx.)      |
| <b>Decomposition temperature:</b>                                | Not determined       |
| <b>Self-igniting:</b>  | Not determined       |

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| <b>Flash point:</b>                                      | 84°C                           |
| <b>Danger of explosion:</b>                              | Not determined                 |
| <b>Explosion limits: Lower:</b>                          | 1.7%                           |
| <b>Explosion limits: Upper:</b>                          | 11.3%                          |
| <b>Vapour pressure:</b>                                  | 0.8 mmHg. At 20°C              |
| <b>Density at 20 °C:</b>                                 | <b>1.020 g/cm<sup>3</sup>.</b> |
| <b>Relative density:</b>                                 | 1.02                           |
| <b>Vapour density:</b>                                   | 4.2                            |
| <b>Evaporation rate:</b>                                 | Not determined                 |
| <b>Solubility in / Miscibility with- water at 20 °C:</b> | Limited solubility             |
| <b>Partition coefficient:(n-octanol/water)</b>           | 1.29                           |
| <b>Viscosity:</b>  | 0.6cP                          |

## SECTION 10: Stability and reactivity

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| <b>10.1 Reactivity</b>                         | No data available  |
| <b>10.2 Chemical stability</b>                 | Stable at room temperature   |
| <b>10.3 Possibility of hazardous reactions</b> | 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. |
| <b>10.4 Conditions to avoid</b>                | 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.   |
| <b>10.5 Incompatible materials:</b>            | Acids, bases, oxidizing agents, reducing agents.   |
| <b>10.6 Hazardous decomposition products</b>   | Carbon dioxide, carbon monoxide  |

## SECTION 11: Toxicological information

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| <b>11.1 Information on toxicological effects</b>         |   |
| <b>Acute Toxicity:</b>                                   | <b>LD50/LC50:</b><br>Draize test, rabbit, eye: 100 mg Severe;<br>Draize test, rabbit, eye: 100 mg/24H<br>Moderate;<br>Oral, mouse: <b>LD50</b> = 5105 mg/kg;<br>Oral, rat: <b>LD50</b> = 3980 mg/kg |
| <b>Germ cell mutagenicity:</b>                           | no data available   |
| <b>Carcinogenicity:</b>                                  | Not listed by ACGIH, IARC, NTP, or CA Prop 65.  |
| <b>Reproductive toxicity:</b>                            | no data available   |
| <b>Specific target organ toxicity - single exposure:</b> | No data available   |

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| <b>Specific target organ toxicity - repeated exposure:</b> | No data available   |
| <b>Aspiration hazard:</b>                                  | No data available   |
| <b>Signs and Symptoms of Exposure:</b>                     | Always have on hand on first-aid kit, together with proper instructions   |
| <b>11.2 Additional toxicological information</b>           |   |
| <b>Aquatic Toxicity:</b>                                   | Fish: 96 Hr <b>LC50</b> Pimephales promelas: 298 mg/L;<br>96 Hr <b>LC50</b> Oncorhynchus mykiss: 290 mg/L;<br>96 Hr <b>LC50</b> Lepomis macrochirus: 307 mg/L<br>Algae: 72 Hr <b>EC50</b> Desmodesmus subspicatus: >500 mg/L<br>Invertebrate: 24 Hr <b>EC50</b> Daphnia magna: 790 mg/L [Static]; 48 Hr |
|  | EC50 Daphnia magna: 646 mg/L.   |
| <b>Biodegradability:</b>                                   | moderate biodegradable  |

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

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

## SECTION 15: Regulatory information

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

## 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.