Safety Data Sheet



According to the UN GHS revision 8

Creation Date: May 28, 2024 Revision Date: May 28, 2024

1. IDENTIFICATION

1.1 GHS Product identifier

Product name: Ethyl acetoacetate

Catalog Number: T15254

CAS Number: 141-97-9

1.2 Other means of identification

Other names:

1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Uses advised against: 36 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Not classified.

2.2 GHS label elements, including precautionary statements

Pictogram(s):

Signal word: No signal word

Hazard statement(s): none

Precautionary statement(s):

Prevention:noneResponse:noneStorage:noneDisposal:none

2.3 Other hazards which do not resultin classification

no data available

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 Substances

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Chemical name	Common names and synonyms	CAS number	EC number
Ethyl acetoacetate	-	141-97-9	205-516-1

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Rest.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Liquid may cause mild irritation of eyes. (USCG, 1999)

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use alcohol foam, carbon dioxide, dry chemical.

5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. Substance may be transported hot. For hybrid vehicles, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. If molten aluminum is involved, refer to ERG Guide 169. (ERG, 2016)

5.3 Special protective actions for fire-fighters

Use water spray, powder, foam, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Wash away remainder with plenty of water.

6.2 Environmental precautions

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Wash away remainder with plenty of water.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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HANDLING AND STORAGE

7.1 Precautions for safe handling

NO open flames. Above 70°C use a closed system and ventilation. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Ventilation along the floor. Well closed.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

PHYSICAL AND CHEMICAL PROPERTIES

Ethyl acetoacetate is a colorless liquid with a fruity odor. Flash point 185°F. Boiling point 365°F. May **Physical state**

cause adverse health effects if ingested or inhaled. May irritate to skin, eyes and mucous

membranes. Used in organic synthesis and in lacquers and paints.

Color **COLORLESS LIQUID**

Odour PLEASANT GREEN, FRUITY, RUM ODOR

Melting point/ freezing point 285°C(dec.)(lit.)

Boilingpoint or initial boiling point

and boiling range

184°C

Combustible. Flammability

Lower and upper explosion

limit/flammability limit

FLAMMABLE LIMITS (BY VOL) 1.4% AT 200 DEG F (93 DEG C) & 9.5% AT 350 DEG F (176 DEG C).

Flash point 75°C(lit.)

Auto-ignition temperature 563° F (USCG, 1999)

Decomposition temperature no data available

no data available pН

Page 3 of 7 www.targetmol.com Kinematic viscosity no data available

Solubility H2O: 90.0 mg/mL (691.6 mM), Sonication is recommended.

DMSO: 90.0 mg/mL (691.6 mM), Sonication is recommended.

N-octanol-water partition

coefficient

log Kow = 0.25

Vapour pressure 1 mm Hg (28.5 °C)

Density and/ or relative density 1.021

Relative vapour density 4.48 (vs air)

Particle characteristics no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reacts with strong oxidants.

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

MODERATE WHEN EXPOSED TO HEAT OR FLAME. The vapour is heavier than air. ETHYL ACETOACETATE, a beta-keto ester, is more reactive than many esters. Undergoes an exothermic cleavage reaction in the presence of concentrated base. Reacts with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides. Mixing with 2,2,2-tris(bromomethyl) ethanol and zinc led to an explosion [US Patent 3 578 619, Crotonaldehyde may rapidly polymerize with ethyl acetoacetate (Soriano, D.S. et al. 1988. Journal of Chemical Education 65:637.).1971].

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: no data available
Inhalation: no data available
Dermal: no data available
Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

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Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the eyes, skin and respiratory tract.

STOT-repeated exposure

no data available

Aspiration hazard



A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available



14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

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no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Listed.

16. OTHER INFORMATION

Information on revision

Creation Date May 28, 2024

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- · STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.

org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

 ${\sf ERG-Emergency~Response~Guidebook~by~U.S.~Department~of~Transportation,~website:~http://www.phmsa.dot.}\\$

gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Other Information

no data available

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