

ALFAAL03758

tert-Butyl acetoacetate

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

| | |
|---|--|
| 产品说明: Product Description: | tert-Butyl acetoacetate tert-Butyl acetoacetate |
| Cat No. : | L03758 |
| CAS No | 1694-31-1 |
| Molecular Formula | C8 H14 O3 |
| Supplier | Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608 |
| Emergency Telephone Number | For information US call: 001-800-227-6701 / Europe call: +32 14 57 52 11 Emergency Number US :001-201-796-7100 / Europe : +32 14 57 52 99 CHEMTREC Tel. No. US :001-800-424-9300 / Europe :001-703-527-3887 |
| E-mail address | begel.sdsdesk@thermofisher.com |
| Recommended Use Uses advised against | Laboratory chemicals. No Information available |

SECTION 2. HAZARD IDENTIFICATION

| | | |
|--|-----------------------------|-------------------------|
| Physical State Liquid | Appearance Yellow | Odor Odorless |
| Emergency Overview Combustible liquid. | | |

Classification of the substance or mixture

| | |
|--------------------|------------|
| Flammable liquids. | Category 4 |
|--------------------|------------|

Label Elements

None required

Signal Word **Warning**

Hazard Statements
H227 - Combustible liquid

Precautionary Statements Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Physical and Chemical Hazards

Combustible material.

Health Hazards

The product contains no substances which at their given concentration are considered to be hazardous to health.

Environmental hazards

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its water solubility. The product is water soluble, and may spread in water systems.

This product does not contain any known or suspected endocrine disruptors.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|--|-----------|----------|
| Butanoic acid, 3-oxo-, 1,1-dimethylethyl ester | 1694-31-1 | 99 |

SECTION 4. FIRST AID MEASURES**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

Inhalation

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion

Do NOT induce vomiting. Clean mouth with water. Get medical attention.

Most important symptoms and effects

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Self-Protection of the First Aider

No special precautions required.

Notes to Physician

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO₂). Dry chemical. Water mist may be used to cool closed containers. Chemical foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

No information available.

Specific Hazards Arising from the Chemical

Combustible material. Flammable. Containers may explode when heated.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions

See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition.

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Take precautionary measures against static discharges. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Keep containers tightly closed in a dry, cool and well-ventilated place.

Specific Use(s)

Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours

Exposure Controls

Engineering Measures

None under normal use conditions. Ensure adequate ventilation, especially in confined areas. .

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers recommendations | - | EN 374 | (minimum requirement) |
| Butyl rubber | | | | |
| Nitrile rubber | | | | |
| Neoprene | | | | |
| PVC | | | | |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

tert-Butyl acetoacetate

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

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| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure |
| Respiratory Protection | No protective equipment is needed under normal use conditions. |
| Large scale/emergency use | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Particle filter |
| Small scale/Laboratory use | Maintain adequate ventilation Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 |

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|--------------------------|--|
| Appearance | Yellow | |
| Physical State | Liquid | |
| Odor | Odorless | |
| Odor Threshold | No data available | |
| pH | No information available | |
| Melting Point/Range | -38 °C / -36.4 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 190 °C / 374 °F | @ 760 mmHg |
| Flash Point | 76 °C / 168.8 °F | Method - No information available |
| Evaporation Rate | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | Lower 1.1 | |
| Vapor Pressure | No data available | |
| Vapor Density | 5.5 | (Air = 1.0) |
| Specific Gravity / Density | 0.970 | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | 9 G/L WATER (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Autoignition Temperature | 390 °C / 734 °F | |
| Decomposition Temperature | No data available | |
| Viscosity | No data available | |
| Explosive Properties | | explosive air/vapour mixtures possible |
| Oxidizing Properties | No information available | |
| Molecular Formula | C8 H14 O3 | |
| Molecular Weight | 158.2 | |

SECTION 10. STABILITY AND REACTIVITY

Stability Stable.

| | |
|---|--|
| Hazardous Reactions | No information available. |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Conditions to Avoid | Exposure to air. Exposure to light. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition. |
| Materials to avoid | Strong oxidizing agents. Strong bases. |
| Hazardous Decomposition Products | Carbon monoxide (CO). Carbon dioxide (CO ₂). |

SECTION 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Product Information | No acute toxicity information is available for this product |
| (a) acute toxicity; | |
| (b) skin corrosion/irritation; | No data available |
| (c) serious eye damage/irritation; | No data available |
| (d) respiratory or skin sensitization; | |
| Respiratory | No data available |
| Skin | No data available |
| (e) germ cell mutagenicity; | No data available |
| (f) carcinogenicity; | No data available |
| | There are no known carcinogenic chemicals in this product |
| (g) reproductive toxicity; | No data available |
| (h) STOT-single exposure; | No data available |
| (i) STOT-repeated exposure; | No data available |
| Target Organs | No information available. |
| (j) aspiration hazard; | No data available |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |

SECTION 12. ECOLOGICAL INFORMATION

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|--------------------------------------|--|
| Ecotoxicity effects | . |
| Persistence and Degradability | |
| Persistence | Soluble in water, Persistence is unlikely, based on information available. |

| | |
|--|---|
| Bioaccumulative Potential | Bioaccumulation is unlikely |
| Mobility in soil | The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility Highly mobile in soils |
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors |
| Persistent Organic Pollutant | This product does not contain any known or suspected substance |
| Ozone Depletion Potential | This product does not contain any known or suspected substance |

SECTION 13. DISPOSAL CONSIDERATIONS

| | |
|--|---|
| Waste from Residues/Unused Products | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
| Contaminated Packaging | Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers. |
| Other Information | Waste codes should be assigned by the user based on the application for which the product was used. |

SECTION 14. TRANSPORT INFORMATION

| | |
|-------------------------------------|---------------------------------|
| Road and Rail Transport | Not Regulated |
| IMDG/IMO | Not regulated |
| IATA | Not regulated |
| Special Precautions for User | No special precautions required |

SECTION 15. REGULATORY INFORMATION**International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

| Component | The Inventory of Hazardous Chemicals (2015 Edition) | List of dangerous goods GB 12268 - 2012 | TCSI | IECSC | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | AICS | KECL |
|--|---|---|------|-------|-----------|------|-----|-------|------|------|------|---------|
| Butanoic acid, 3-oxo-, 1,1-dimethylethyl ester | - | - | X | X | 216-904-5 | X | X | X | X | X | X | 97-3-83 |

National Regulations**SECTION 16. OTHER INFORMATION**

Prepared By
Revision Date
Revision Summary

Health, Safety and Environmental Department
22-Apr-2024
New emergency telephone response service provider.

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Disclaimer

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End of Safety Data Sheet