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

**1.1 Product identifiers**

Product name : *tert* - Butyl α -hydroxyisobutyrate

CAS-No. : 36293-63-7

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**
Flammable liquids (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**
Flammable.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



| | |
|---|---|
| Signal word | Warning |
| Hazard statement(s) H226 | Flammable liquid and vapour. |
| Precautionary statement(s) | none |
| Supplemental Hazard Statements | none |

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

| | |
|---|---|
| Hazard symbol(s) | none |
| R-phrase(s) R10 | Flammable. |
| S-phrase(s) | none |

**2.3 Other hazards** - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

Synonyms : tert-Butyl 2-hydroxy-2-methylpropionate

Formula : C8H16O3

Molecular Weight : 160.21 g/mol

| Component | Concentration |
|---|---|
| **Tert-Butyl 2-hydroxyisobutyrate** | |
| CAS-No. 36293-63-7 | - |
| EC-No. 252-952-3 | |

## 4. FIRST AID MEASURES

**4.1 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**
Flush eyes with water as a precaution.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 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.

**4.3 Indication of any immediate medical attention and special treatment needed**
no data available

## 5. FIRE-FIGHTING MEASURES

**5.1 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.

**5.2 Special hazards arising from the substance or mixture**
Carbon oxides

**5.3 Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**
Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures**
Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**6.2 Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 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).

**6.4 Reference to other sections**
For disposal see section 13.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling**
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

**7.2 Conditions for safe storage, including any incompatibilities**
Store in cool place. 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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

**Components with workplace control parameters**

**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**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**
impervious clothing, Flame retardant antistatic protective 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

**9.1 Information on basic physical and chemical properties**

| | | |
|---|---|---|
| a) | Appearance | Form: clear, liquid<br>Colour: colourless |
| b) | Odour | no data available |
| c) | Odour Threshold | no data available |
| d) | pH | no data available |
| e) | Melting point/freezing point | no data available |
| f) | Initial boiling point and boiling range | no data available |
| g) | Flash point | 49 °C - closed cup |
| h) | Evaporation rate | no data available |
| i) | Flammability (solid, gas) | no data available |
| j) | Upper/lower flammability or explosive limits | no data available |
| k) | Vapour pressure | no data available |
| l) | Vapour density | no data available |
| m) | Relative density | 0.924 g/mL at 25 °C |
| n) | Water solubility | no data available |
| o) | Partition coefficient: n-octanol/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 |

**9.2 Other safety information**
no data available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**
no data available

**10.2 Chemical stability**
no data available

**10.3 Possibility of hazardous reactions**
no data available

**10.4 Conditions to avoid**
Heat, flames and sparks.

**10.5 Incompatible materials**
Strong oxidizing agents

**10.6 Hazardous decomposition products**
Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**

**Acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
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** | May cause 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: Not available

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity**
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 Results of PBT and vPvB assessment**
no data available

**12.6 Other adverse effects**
no data available

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

**Product**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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

**14.1 UN number**
ADR/RID: 3272 IMDG: 3272 IATA: 3272

**14.2 UN proper shipping name**
ADR/RID: ESTERS, N.O.S. (Tert-Butyl 2-hydroxyisobutyrate)
IMDG: ESTERS, N.O.S. (Tert-Butyl 2-hydroxyisobutyrate)
IATA: Esters, n.o.s. (Tert-Butyl 2-hydroxyisobutyrate)

**14.3 Transport hazard class(es)**
ADR/RID: 3 IMDG: 3 IATA: 3

**14.4 Packaging group**
ADR/RID: III IMDG: III IATA: III

**14.5 Environmental hazards**
ADR/RID: no IMDG Marine pollutant: no IATA: no

**14.6 Special precautions for user**
no data available

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
no data available

**15.2 Chemical Safety Assessment**
no data available

## 16. OTHER INFORMATION

**Further information**

For R&D use only. Not for drug, household or other uses.
WARRANTY:
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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