Butanoic acid, 2,2-bis(hydroxymethyl)- (cas 10097-02-6) MSDS

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

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>2,2-Bis(hydroxymethyl)butyric acid</td>
</tr>
<tr>
<td>Product Number</td>
<td>470627</td>
</tr>
<tr>
<td>Brand</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-420-00-9</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>10097-02-6</td>
</tr>
</tbody>
</table>

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]

- Serious eye damage (Category 1)
- Chronic aquatic toxicity (Category 3)

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Risk of serious damage to eyes.

2.2 Label elements

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

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Signal word</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Precautionary statement(s)</td>
<td></td>
<td>Avoid release to the environment.</td>
</tr>
<tr>
<td>P273</td>
<td></td>
<td>Wear protective gloves/ eye protection/ face protection.</td>
</tr>
<tr>
<td>P280</td>
<td></td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P305 + P351 + P338</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Hazard Statements


<table>
<thead>
<tr>
<th>Hazard symbol(s)</th>
<th>R-phrase(s)</th>
<th>S-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R41 R52/53</td>
<td>S26 S39 S61</td>
</tr>
<tr>
<td></td>
<td>Risk of serious damage to eyes.</td>
<td>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
<tr>
<td></td>
<td>Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
<td>Wear eye/face protection.</td>
</tr>
</tbody>
</table>

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C6H12O4</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>148.16 g/mol</td>
</tr>
<tr>
<td>Component</td>
<td></td>
</tr>
<tr>
<td>Concentration</td>
<td></td>
</tr>
</tbody>
</table>
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**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
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. **FIREFIGHTING MEASURES**

5.1 **Extinguishing media**
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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**
no data available

6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 **Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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

7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

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.

Immersion protection
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: > 480 min

Material tested: Dematril? (Z677272, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: > 30 min
Material tested: Dematril? (Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de,
test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, 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 particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-faced 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: solid
b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point Melting point/range: 109 - 112 ??C - lit.
f) Initial boiling point and boiling range no data available
g) Flash point no data available
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 no data available
n) Water solubility no data available
o) Partition coefficient: n-octanol/water no data available
p) Autoignition 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
no data available

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 Causes eye burns.

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**

Harmful to aquatic life.

13. **DISPOSAL CONSIDERATIONS**

13.1 **Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

14. **TRANSPORT INFORMATION**

14.1 **UN number**

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
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14.2 **UN proper shipping name**

<table>
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<th>IATA:</th>
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<tbody>
<tr>
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<td>Not dangerous goods</td>
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<tr>
<td></td>
<td>IMDG:</td>
<td>IATA:</td>
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<tr>
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<td>Not dangerous goods</td>
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14.3 **Transport hazard class(es)**

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<th>IATA:</th>
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14.4 **Packaging group**

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14.5 **Environmental hazards**

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</thead>
<tbody>
<tr>
<td>no</td>
<td>IMDG Marine pollutant: no</td>
<td>IATA: no</td>
</tr>
</tbody>
</table>

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**

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 this document is based on the resent 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. guidechem 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.