Material Safety Data Sheet
Dihydroxyacetone msds

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product name</th>
<th>1,3-Dihydroxyacetone</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCI Name</td>
<td>Dihydroxyacetone</td>
</tr>
<tr>
<td>Product Number</td>
<td>C01002B</td>
</tr>
<tr>
<td>Brand</td>
<td>MCBiotec</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>96-26-4</td>
</tr>
<tr>
<td>EINECS</td>
<td>202-494-5</td>
</tr>
</tbody>
</table>

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

Identified uses: The ingredients for self tanning

1.3 Details of the supplier of the safety data sheet

Company: M.C.Biotec Inc.
40 Ma Jia Street
Nanjing, China

Tel: +86-25-86620042
Fax: +86-25-86624072
E-mail address: mc@mcbiotec.com

1.4 Emergency telephone number

Emergency Phone #: +86-25-86620042

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Skin irritation (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Irritating to eyes, respiratory system and skin.

2.2 Label elements

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

Pictogram

Signal word Warning
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements
Hazard symbol(s) 
R-phrase(s) R36/37/38 Irritating to eyes, respiratory system and skin.
S-phrase(s) S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
2.3 Other hazards - none

Section 3: Composition and Information on Ingredients

3.1 Substances
Synonyms : 1,3-Dihydroxy-2-propanone;DHA
Formula : C₃H₆O₃
Molecular Weight : 90.08 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Dihydroxyacetone</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>96-26-4</td>
</tr>
</tbody>
</table>

Section 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

### Section 5: Fire Fighting 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

### Section 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
Do not let product enter drains.

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.

### Section 7: Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. 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.
Keep in a dry place.

7.3 Specific end uses
no data available

### Section 8: Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 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. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| a) Appearance | Form: powder |
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | 3.0-6.0 (50g/l, H2O, 20°C) |
| e) Melting point/freezing point | 83 °C (Monomer); 96.5°C(Dimer) |
| f) Initial boiling point and boiling range | 188°C (decomposition) |
| g) Flash point | no data available |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | Not a highly flammable solid |
| j) Upper/lower flammability or | no data available |
### explosive limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>k) Vapour pressure</td>
<td>&lt; - 0.01 Pa (20 °C)</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1.52 g/cm³ (20 °C)</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>&gt; 930 g/l (at 20°C) according to EC A.6.</td>
</tr>
<tr>
<td>o) Partition coefficient: noctanol/water</td>
<td>Log Pow = -1.822</td>
</tr>
<tr>
<td>p) Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>no data available</td>
</tr>
<tr>
<td>s) Explosive properties</td>
<td>no data available</td>
</tr>
<tr>
<td>t) Oxidizing properties</td>
<td>no data available</td>
</tr>
</tbody>
</table>

### 9.2 Other safety information

no data available

### Section 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

Exposure to moisture.

#### 10.5 Incompatible materials

Strong oxidizing agents

#### 10.6 Hazardous decomposition products

Other decomposition products - no data available

### Section 11: Toxicological Information

#### 11.1 Information on toxicological effects

**Acute oral toxicity**

LD₅₀ rat

Dose: >16,000mg/kg

**Acute inhalation toxicity**

LC₅₀ rat
Dose: >5.1 mg/l, 4h  
Method: OECD Test Guideline 403  
Aerosol

**Sensitisation**  
In animal experiments:  
Results: Negative  
Method: OECD Test Guideline 429

**Genotoxicity in vitro**  
Mutagenicity (mammal cell test):  
Result: negative  
Method: OECD Test Guideline 476

**Ames test**  
Salmonella typhimurium  
Result: positive  
Method: OECD Test Guideline 471

**Carcinogenicity**  
Did not show carcinogenic effects in animal experiments (Lit.)

**Specific target organ toxicity – single exposure**  
The substances or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity – repeated exposure**  
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

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.

ACGIH  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP  No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Potential health effects**

**Inhalation**  
May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion**  
May be harmful if swallowed.

**Skin**  
May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**  
Causes serious 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

### Section 12: Ecological Information

#### 12.1 Toxicity

**Toxicity to daphnia and other aquatic invertebrates.**

**EC50**
Species: Daphnia magna (Water flea)
Dose: >100mg/l
Exposure time: 48h
Method: OECD Test Guideline 202

**Toxicity to algae**

**IC50**
Species: Desmodesmus subspicatus (green algae)
Dose: >100mg/l
Exposure time: 72h
Method: OECD Test Guideline 201

**Toxicity to bacteria**

**EC50**
Species: activated sludge
Dose: >1,000mg/l
Exposure time: 3h
Method: OECD Test Guideline 209

#### 12.2 Persistence and degradability

**Biodegradability**
Result: Readily biodegradable.
77%
Exposure time: 28d
Method: OECD Test Guideline 301D

#### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water
log Pow: -1.95
Method: OECD Test Guideline 107
Bioaccumulation is not expected (log Pow <1)

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex, XIII.
### Section 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.

### Section 14: Transport Information

#### 14.1 UN number

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
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</table>

#### 14.2 UN proper shipping name

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

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
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</table>

#### 14.4 Packaging group

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
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#### 14.5 Environmental hazards

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

#### 14.6 Special precautions for user

no data available

### Section 15: Regulatory Information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU regulations**

- Major Accident Hazard Legislation: 96/82/EC
- Directive 96/82/EC does not apply

#### 15.2 Chemical Safety Assessment

no data available

### Section 16: Other Information

**Other Special Considerations:** Not available.

**Disclaimer**
The information above is based on our present knowledge. However, no representation, warranty or guarantee...