SAFETY DATA SHEET

according to Regulation (EC) No.1907/2006

Version 1.0 Revision Date 03.03.2013

Print Date 7.6.2013

Material Safety Data Sheet

Dihydroxyacetone msds

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

1.1 **Product identifiers**

Product name	:	1,3-Dihydroxyacetone
INCI Name	:	Dihydroxyacetone
Product Number	:	C01002B
Brand	:	MCBiotec
CAS-No.	:	96-26-4
EINECS	:	202-494-5

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
Hazard statement(s)	
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	none

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

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

Component			Concentration
1,3-Dihydroxyacetone			
	CAS-No.	96-26-4	-

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

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

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 Colour: white
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	
	k)	Vapour pressure	< - 0.01 Pa (20 °C)
	l)	Vapour density	no data available
	m)	Relative density	1.52 g/cm3 (20 °C)
	n)	Water solubility	> 930 g/l (at 20°C) according to EC A.6.
	o)	Partition coefficient: noctanol/water	Log Pow = -1.822
	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

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: >5,1mg/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 meets the criteria for PBT or VPvB according to Regulation (EC) No 1907/2006, Annex, XIII.

12.6 **Other adverse effects**

Additional ecological information

Do not allow to run into surface waters, wastewater, or soil

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**

ADR/RID: - IMDG: - IATA: -

14.2 **UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 **Transport hazard class(es)**

ADR/RID: - IMDG: - IATA: -

14.4 **Packaging group**

ADR/RID: - IMDG: - IATA: -

14.5 **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

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 96/82/EC

Legislation 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

of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

Updated: June 10, 2013