TENNANTS DISTRIBUTION LIMITED
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PRODUCT SPECIFICATION

Product Name	Dihydroxyacetone (DHA)
Specification Reference	DHA/1 (18/01/0029930)

Description

1,3-Dihydroxyacetone (DHA) is produced by the fermentation and bio enzymes conversion in compliance with GMP rules. It has a sweet and fruity odour, hygroscopic and easily decomposable, melting point 75-80℃, solubility＞250g.L-1(20°C), stable at pH 6.0

SALES SPECIFICATION

Appearance	White to almost white fine crystalline free flowing powder
Identity (IR-Spectrum)	Up to the standard
Appearance of the solution	Clear
Water	≤0.50%
pH	4.0 – 6.0
Glycerol (TLC)	≤0.5%
Protein (colorimetric)	≤0.1%
Assay (HPLC)	98.0% ~ 102.0%
Heavy Metals (Pb)	≤10 ppm
Iron (Fe)	≤20 ppm
Arsenic (As_2O_3)	≤3 ppm

Further information

Shelf life: 12 months from the date of manufacture, in the original unopened container under the suggested storage conditions.

Applications: DHA is the main active ingredient in all sunless tanning skincare preparations. It may be used alone or combined with other tanning components such as Erythrulose. DHA is considered as the most effective sun-free tanning additive. DHA has been approved for cosmetic use by the FDA, the Canadian Health Ministry and most of the EU member nations.

NOTES

Exclusion of Liability

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Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Trade Name	Maxcel DHA
Chemical Name	Dihydroxyacetone
EC Number	202-494-5
CAS Number	96-26-4

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

Identified use(s)
Additive. Cosmetics
Uses advised against: No data available

1.3 Details of the supplier of the safety data sheet

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Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0)844 335 0001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation 1272/2008 (CLP)

Not classified

2.2 Label elements

Not classified

2.3 Other hazards

None under normal conditions. This product does not contain substance of very high concern (SVHC).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical Name	1,3-Dihydroxyacetone
EC No.	202-494-5
CAS No.	96-26-4
Percent	≥98%

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information
When in doubt or if symptoms are observed, get medical advice.

Inhalation
Remove victim out of the danger area. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention if ill effect develops.

Skin contact
Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if ill effect or irritation develops.

Eye contact
Continue to rinse eye with clean water for 10 - 15 minutes, retracting eyelids often. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation develops.

Ingestion
Rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Seek medical advice.

4.2 Most import symptoms and effects, both acute and delayed
No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Give supportive therapy. Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media
Suitable extinguishing media: Foam. Carbon dioxide (CO_2). Dry extinguishing powder Water spray.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products
Hazardous combustion products. Thermal decomposition generates: Carbon oxides.

5.3 Advice for fire-fighters
Special protective equipment for firefighters. Wear a self-contained breathing apparatus and chemical protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment (see chapter 8). Do not breathe dust.

6.2 Environmental precautions
Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up
For cleaning up. Take up mechanically, placing in appropriate containers for disposal. Dispose in a safe manner in accordance with local/national regulations.

6.4 Reference to other sections
See also Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Good ventilation of the workplace required. Avoid contact with skin and eyes. Avoid dust production. Avoid ingestion and inhalation..

7.2 Conditions for safe storage, including any incompatibilities
Keep container closed when not in use. Keep container tightly closed. Store in dry, cool, well-ventilated area.
Hints on joint storage.
Storage class: 13
Further information on storage conditions Maximum storage temperature: 8°C Minimum storage temperature: 0°C

7.3 Specific end use(s)
None

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

None

8.2 Exposure controls

Respiratory protection
Wear approved half mask dust respirator in accordance with DIN EN 136/140. In case of insufficient ventilation, wear suitable respiratory equipment.

Body protection
Wear a chemical resistant overall of polyester or similar material (EN 465). Wear safety shoes.

Hand protection
Wear appropriate chemical resistant gloves according EN 374 also with prolonged, direct contact (Recommended: Protective index 6).
Long-term exposure: Breakthrough time: 480 min Thickness of the material: 0.7 mm
Short-term exposure: Breakthrough time: 30 min Thickness of the material: 0.4 mm Material: Neoprene. PVC (Polyvinyl chloride).

Eye protection
Wear appropriate personal eye protection depending on the work to be performed in accordance with EN166. Chemical goggles or safety glasses.

Other skin and body protection
Provide eyewash station and safety shower. Wear appropriate clothing to prevent skin contamination.

Hygiene Measures
General health and safety measures When using do not eat, drink or smoke. Wash hands before breaks and after work. Good ventilation of the workplace required. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash clothing before re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Powder
Odour	Characteristic

Melting point/range	70 – 130ºC
Initial boiling point/range	175 – 260ºC
Decomposition temperature	185 – 235ºC
Density (25ºC)	1520 kg/m^3
Solubility in water	930 g/l
Log Pow	-1.95
Surface tension	68.85 mN/m

9.2 Other information

No further information

10. STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Moisture. Strong oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition generates: Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

LD50: Oral, Rat. Effective dose: > 16000 mg/kg

Acute inhalation toxicity

LC50: Inhalation, Rat. Effective dose: 5,114 mg/l Exposure time: 4 h

Skin corrosion/irritation

Non-irritating

Serious eye damage/irritation

Non-irritating

Skin sensitisation

Non-sensitising

Repeated dose toxicity (sub-acute, sub-chronic, chronic)

NOEL(c): Oral, Rat. Effective dose:>1000 mg/kg

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute fish toxicity: LC_{50}, 72h >100 mg/l, Danio rerio. OECD 203

Acute daphnia toxicityEC50, Daphnia magna >=0.1 mg/l 48h, OECD 202

Acute algae toxicity: ErC50, EbC50, Desmodesmus subspicatus, >100 mg/l

Chronic algae toxicity: NOEC, Desmodesmus subspicatus, >=100 mg/l, 72h

12.2 Persistence and degradability

No information available

12.3 Bio accumulative potential

No information available

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION

The product is not covered by international regulations on the transport of dangerous goods

14.1 UN Number	Not applicable
14.2 Proper Shipping Name	Not applicable
14.3 Transport hazard class	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental Environmentally hazardous/Marine pollutant	 No
14.6 Special precautions for users	Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

15. REGULATORY INFORMATION

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

Ensure all national/local regulations are observed.
Water hazard class (WGK): Class nwg (Non-hazardous to water). Classification according to VwVwS

15.2 Chemical safety assessment
No chemical safety assessment has been carried out

16. OTHER INFORMATION

Source of key data used to compile the data sheet
Supplier information

Modifications from last revision
First issue
Date: 29/01/18