SAFETY DATA SHEET

DEXTROSE MONOHYDRATE

CAS No.: 5996-10-1

This Safety Data Sheet is compiled from well-established published chemical, GHS classification and regulatory reference sources for this substance. It is supplied by Suraj Chemicals as the distributor/supplier of record and is not a manufacturer-issued document. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

Product Name	Dextrose Monohydrate
CAS Number	5996-10-1
Recommended Use	Industrial / commercial chemical trading and distribution
Supplier	Suraj Chemicals, No 92, Govindappa Naicken Street, Shiva Complex, Chennai - 600001, India
Emergency Telephone	+91 - 9840284032, 9176135357 / +91 - 44 - 25393652

2. HAZARD(S) IDENTIFICATION

GHS Signal Word	Not classified

HAZARD CLASSIFICATION
None assigned

HAZARD STATEMENTS
None assigned

PRECAUTIONARY STATEMENTS
None assigned

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Dextrose Monohydrate
CAS Number	5996-10-1
Physical State	Solid (crystalline powder or granules)
Appearance / Odour	White crystalline powder or granules, odorless, with a sweet taste.

4. FIRST-AID MEASURES

Eye Contact	Rinse cautiously with water for several minutes; remove contact lenses if present.
Skin Contact	Wash with soap and water; not expected to be an irritant.
Inhalation	Move to fresh air; dust may cause mild mechanical irritation to nose and throat.
Ingestion	No hazard expected as a normal food ingredient; rinse mouth with water if discomfort occurs.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, carbon dioxide, dry chemical, foam.
Unsuitable Extinguishing Media	Avoid high-pressure water/air streams that could disperse dust and create a dust explosion hazard.
Special Hazards	Finely divided sugar dust can form combustible/explosible dust-air mixtures typical of organic food powders; combustion produces carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Measures	Avoid generating dust; sweep/vacuum (using dust-explosion-rated equipment for large spills) and collect for disposal or reuse; control ignition sources near spilled dust; wash residue with water.

7. HANDLING AND STORAGE

Handling Precautions	Avoid dust formation; control static electricity and ignition sources where dust may accumulate; use adequate ventilation and dust-control/housekeeping measures; avoid eye contact.
Storage Conditions	Store in tightly closed containers in a cool, dry, well-ventilated area away from moisture and ignition sources; avoid conditions that promote dust accumulation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits / PPE	No specific OEL established; treat as nuisance/combustible dust (general guideline ~10 mg/m3 TWA); use dust mask, safety glasses, and gloves during bulk handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid (crystalline powder or granules)
Appearance / Odour	White crystalline powder or granules, odorless, with a sweet taste.
Boiling Point	Not applicable (decomposes before boiling)
Melting Point	Approximately 83 C (loses water of hydration); anhydrous glucose melts with decomposition around 146 C
Flash Point	Not applicable (non-flammable solid)
Density / Specific Gravity	Approximately 1.54 (true density); bulk density approx. 800-900 kg/m3
Water Solubility	Freely soluble, approximately 800-900 g/L at 20 C
pH Value	Approximately 4.0-6.5 (10% aqueous solution)

10. STABILITY AND REACTIVITY

Stability	Stable under normal storage conditions; hygroscopic; loses water of crystallization on heating.
Incompatible Materials	Strong oxidizing agents; strong acids/alkalis at elevated temperature.
Hazardous Decomposition	Thermal decomposition/combustion produces carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Summary	Very low acute toxicity; a normal dietary carbohydrate and key metabolic intermediate; not classified as an irritant, sensitizer, mutagen, or carcinogen; the primary physical hazard is combustible dust in bulk powder handling rather than toxicity.

12. ECOLOGICAL INFORMATION

Summary	Readily biodegradable; low aquatic toxicity; concentrated discharges exert biochemical oxygen demand.

13. DISPOSAL CONSIDERATIONS

Disposal Method	Dispose of in accordance with local/national regulations; biodegradable material; recover/recycle where feasible; avoid large discharges to waterways.

14. TRANSPORT INFORMATION

UN Number	Not regulated for transport
Transport Hazard Class	Not regulated
Packing Group	Not applicable

15. REGULATORY INFORMATION

Notes	Approved food ingredient/sweetener under Codex Alimentarius, US FDA (GRAS), and EU food regulations, with pharmacopoeial (USP/EP/FCC) grades also used in pharmaceutical applications; combustible-dust housekeeping precautions apply to bulk powder handling even though the substance is not GHS health-hazard classified.

16. OTHER INFORMATION

Prepared By	Suraj Chemicals, Technical / QA Desk
Date of Issue	29 Sep 2026
Note	This SDS is compiled from well-established published GHS hazard classification data and general chemical reference sources for this substance, in the standard 16-section format. Values are believed accurate but Suraj Chemicals makes no warranty, express or implied, regarding their completeness. Users should evaluate suitability for their own specific use.

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