



MATERIAL SAFETY DATA SHEET



TITAN BIOTECH LIMITED

Corp. Office: 903-909, 9th floor, Bigjos Tower, Netaji Subhash Place, Delhi-110034

Customer Care Cell: 91-11-27674615, customercare@titanbiotechltd.com

D-GLUCOSE - (MONO) Dextrose

Section 1: Chemical Product Identification

Product Name: D-GLUCOSE (MONO) Dextrose (Extra Pure)

Product Code: 1303

CAS#: 5996-10-1

Synonym: D-(+)-Glucosemonohydrate; Dextrosemonohydrate; Glucose.

Chemical Name: D-Glucose, monohydrate, Dextrose Monohydrate.

Chemical Formula: C₆H₁₂O₆.H₂O

Formula Weight: 198.17

Section 2: Composition and Information on Ingredients

Composition:

Name: D-GLUCOSE (MONO) Dextrose (Extra Pure)

Toxicological Data on Ingredients: Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

This substance is not classified as dangerous according to Directive 67/548/EEC.

Section 3: Hazards Identification

Classification of the substance or mixture

Potential Acute Health Effects: Not a hazardous substance or mixture:

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not Available.

MUTAGENIC EFFECTS: Not Available.

TERATOGENIC EFFECTS: Not Available.

DEVELOPMENTAL TOXICITY: Not Available.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.



MATERIAL SAFETY DATA SHEET

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Carbon oxides.

Fire Hazards in Presence of Various Substances: Slightly flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures.

Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill: Use personal protective equipment. Sweep up and shovel. Keep in suitable, closed containers for disposal

Large Spill: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid breathing dust. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

Precautions: Keep locked up. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses, Lab coat, Dust respirator, Gloves. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill: Splash goggles, Full suit, Dust respirator, Boots, Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: White colour powder.

Odor: Odourless.

Taste: Sweet.



MATERIAL SAFETY DATA SHEET

Molecular Weight: 198.17

Color: White.

pH: Not Available.

Boiling Point: Not available.

Melting Point: Not available

Critical Temperature: Not available.

Relative Density: Not Available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available

Solubility: Freely soluble in water, clear.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation, Ingestion.

Toxicity to Animals:

LD₅₀: Rat – oral – Not Available

LC₅₀: Not available.

Chronic Effects on Humans: Not Available.

Other Toxic Effects on Humans: Slightly hazardous in case of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.



MATERIAL SAFETY DATA SHEET

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Dextrose monohydrate.

Other Regulations: Not available.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations. Not applicable.

HMS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard: Not Available.

Protective Equipment: Gloves, Lab coat, Safety glasses, Dust respirator - be sure to use an approved/certified respirator or equivalent.

Section 16: Other Information

References: Full text of H AND R-Statements.

Not Applicable.

Other Special Considerations: Not available.

Disclaimer:

TITAN BIOTECH LTD. PROVIDES THE INFORMATION CONTAINED HEREIN IN GOOD FAITH BUT MAKES NO REPRESENTATION AS TO ITS COMPREHENSIVENESS OR ACCURACY. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT. INDIVIDUALS RECEIVING THE INFORMATION MUST EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. TITAN BIOTECH LTD. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TITAN BIOTECH LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.
