LIVINGSTONE INTERNATIONAL PTY LTD

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Issue Date: 30/08/2021
Last Revision Date: N/A
Superseded Date: N/A
Version Number: 01

SAFETY DATA SHEET

Product Code: CSGA018-500G

SECTION 1 PRODUCT IDENTIFICATION

GHS Product Identifier
D-GLUCOSE
Not classified as hazardous

Recommended use of the chemical and restrictions on use
Confectionery, infant foods, medicine, brewing and wine-making, intermediate, caramel colouring, baking and canning, source of methane by anaerobic fermentation, source of certain amino acids by fermentation and laboratory reagent.

Other Names
$C_6H_{12}O_6$

Grape sugar, Dextrose, Glucose, Corn sugar, Dextrosol .

Other Information
Livingstone International Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Livingstone International Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Livingstone International Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

SECTION 2 HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004] 3rd Edition, Safe Work Australia.
Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization
Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
D-Glucose monohydrate	5996-10-1	100 %		
D-Glucose	50-99-7	100 %		

SECTION 4 FIRST AID MEASURES

Inhalation
Remove victim to fresh air.

Ingestion
Give plenty of water to drink. If a large object has been swallowed, seek medical assistance.

Skin
Remove contaminated clothing and wash affected skin with soap and water.

Eye contact
Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.

First Aid Facilities
Maintain eyewash fountain and safety shower in work area.

Advice to Doctor
Treat symptomatically.

Other Information
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

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SECTION 5 FIRE FIGHTING MEASURES

Hazards from Combustion Products	This material is combustible and may cause danger in dust explosion. May release oxides of carbon.
Specific Methods	Small fire: Use dry chemical, CO_2, water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Specific hazards arising from the chemical	May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive gases. In sufficient quantity and reduced particle size is capable of creating a dust explosion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling	Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material. Use with adequate ventilation.
Conditions for safe storage, including any incompatabilities	Store away from oxidizing agents. Store in a cool,dry place. Keep containers closed at all times. Keep in a well-ventilated place

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m³ for dusts or mists when limits have not otherwise been established.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. RECOMMENDATION: Excellent: Nitrile, Neoprene, PVC. Poor: NR latex.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

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SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Form	Solid
Appearance	White granular powder or colourless crystals.
Odour	Odourless.
Melting Point	Anhydrous: 146 °C Monohydrate: 83 °C
Solubility in Water	Very soluble (470 g/L @ 20 °C).
Solubility in Organic Solvents	Soluble in hot methanol, hot pyridine and alcohol. Slightly soluble in acetone. Insoluble in ether.
Specific Gravity	Anhydrous: 1.544 g/cm3 Monohydrate: 0.63 g/cm3
pH	Anhydrous: 5.9 (0.5M, H2O @ 20°C) Monohydrate: 6 - 7 (100g/L, H2O @ 20°C)
Flammability	Combustible.
Auto-Ignition Temperature	~500 °C
Molecular Weight	Anhydrous - 180.16 Monohydrate - 198.17
Other Information	Sweet taste. Exhibits mutarotation from [alpha]20°/D=+112.2° to [alpha]20°/D=+52.7° at c=4 in water. Has the D (right-handed) configuration and is dextrorotatory.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under normal use conditons.
Conditions to Avoid	Exposure to moisture. High temperatures. Incompatibles.
Incompatible Materials	Strong oxidising agents, sodium nitrate.
Hazardous Decomposition Products	Oxides of carbon.
Possibility of hazardous reactions	Reacts with sodium nitrite plus potassium nitrite, sodium peroxide plus potassium nitrate.
Hazardous Polymerization	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Ingestion	Extremely large oral doses may cause gastrointestinal disturbances.
Inhalation	Mild irritant. Dust may irritate respiratory system.
Skin	No adverse effects expected.
Eye	Contact may cause transient, mechanical irritation.
Carcinogenicity	Not classified as a human carcinogen.
Mutagenicity	Not considered to be a mutagenic hazard.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity	No ecological data available for this product.
Bioaccumulative Potential	No bioaccumulation is to be expected (log P(o/w) <1.0).

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SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

SECTION 14 TRANSPORT INFORMATION

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SECTION 15 REGULATORY INFORMATION

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled

SECTION 16 OTHER INFORMATION

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 4', Commonwealth of Australia, June 2013. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. 'Labelling of Hazardous Workplace Chemicals, Code of Proctice' Safe Work Australia. Standards Australia 'AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]'. Worksafe Australia, 'Hazardous Substances Information System, 2005'. Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Hazardous Substances (2011)'. Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]'.
Empirical Formula & Structural Formula	Anhydrous - C6H12O6 Monohydrate - C6H12O6.H2O

END OF SDS