

Material Safety Data Sheet

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Infosafe No. 1CH2E Issue Date : May 2004 RE-ISSUED by CHEMSUPP

Product Name : **D-GLUCOSE Monohydrate LR**

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name D-GLUCOSE Monohydrate LR
Product Code GL017
Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address 50 Bedford Street GILLMAN
SA 5013 Australia
Telephone/Fax Number Tel: (08) 8440-2000 Fax: (08) 8440-2001
Recommended 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	Name	Product Code
	D-GLUCOSE	
	D-GLUCOSE Monohydrate AR	GA017
	D-GLUCOSE Monohydrate FG	GP017
	D-GLUCOSE Anhydrous AR	GA018
	D-GLUCOSE Anhydrous LR	GL018
	D-GLUCOSE Anhydrous BP	GP018
	Grape sugar	
	Dextrose	
	Glucose	
	Corn sugar	
	Dextrosol	

Other Information EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply 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 Chem-Supply 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 Chem-Supply 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.

2. HAZARDS IDENTIFICATION

Hazard Classification Not classified as hazardous
NON-HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.

Risk Phrase(s) Not classified as hazardous

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Solid

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Product Name : **D-GLUCOSE Monohydrate LR**

D-Glucose monohydrate	5996-10-1	100 %
D-Glucose	50-99-7	100 %

4. FIRST AID MEASURES

Inhalation	Remove victim to fresh air.
Ingestion	Give plenty of water to drink.
Eye	Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.
First Aid Facilities	Maintain eyewash fountain in work area.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

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	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.
Hazchem Code	None Allocated
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal	Sweep up, but avoid generating dust. Collect and seal in properly labelled drums for disposal. Dispose of in normal industrial waste bin.
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7. HANDLING AND STORAGE

Conditions for Safe Storage	Store away from oxidizing agents. Store in a cool, dry place. Keep containers closed at all times.
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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 NOHSC Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts or mists when limits have not otherwise been established.
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.

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Product Name : **D-GLUCOSE Monohydrate LR**

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Solid

Appearance White granular powder or colourless crystals.

Odour Odourless.

Melting Point Anhydrous - 146 °C
Monohydrate - 83 °C

Solubility in Water 470 g/L (20 °C)

Solubility in Organic Solvents Slightly soluble in alcohol.

Specific Gravity 1.544

pH Value 4 - 6 (10 g/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 $[\alpha]_{20}^{\circ}/D=+112.2^{\circ}$
to $[\alpha]_{20}^{\circ}/D=+52.7^{\circ}$ at c=4 in water.
Has the D (right-handed) configuration and is dextrorotatory.

10. STABILITY AND REACTIVITY

Chemical Stability Stable.

Incompatible Materials Strong oxidising agents.

Hazardous Decomposition Products Oxides of carbon.

Hazardous Reactions Reacts with sodium nitrite plus potassium nitrite, sodium peroxide plus potassium nitrate.

Hazardous Polymerization Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information Oral LD₅₀ (rat): 25800 mg/kg (anhydrous)

Inhalation Dust may irritate respiratory system.

Ingestion Extremely large oral doses may cause gastrointestinal disturbances.

Eye Contact may cause transient irritation.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

U.N. Number None Allocated

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Product Name : **D-GLUCOSE Monohydrate LR**

DG Class None Allocated

Hazchem Code None Allocated

Packing Group None Allocated

15. REGULATORY INFORMATION

Poisons Schedule Not Scheduled

16. OTHER INFORMATION

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula Anhydrous - C6H12O6
Monohydrate - C6H12O6.H2O

Literature References Commonwealth Department of Health and Aged Care, 'Standard for the Uniform Scheduling of Drugs and Poisons No. 18', Commonwealth of Australia, Canberra 2002.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley & Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Dangerous Goods Code 6th. Ed.', AGPS, Canberra, 1998.
South Australia Government, 'Approved Code of Practice for the Labelling of Workplace Substances', 1995.
Standards Australia, 'SAA/SNZ HB76:1997 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 1997.
Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]', AusInfo, Canberra 1999.
Worksafe Australia, 'List of Designated Hazardous Substances [NOHSC:10005(1999)]', AusInfo, Canberra 1999.
Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]', AGPS, Canberra 1994.
Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]', AusInfo, Canberra 1995.

User Codes	User Field Title	User Code
	CAS No.	Anhydrous: 50-99-7
	CAS No.	Monohydrate: 5996-10-1
	...End Of MSDS...	