



SAFETY DATA SHEET SUGAR REVISION 4, DATE 01 JAN 21

1. IDENTIFICATION

Product Name	Sugar
Other Names	NUCANE Low GI Sugar; Organic Coconut Sugar; Sucrose; Sugar - Bottlers; Sugar - Caster; Sugar - Golden Raw; Sugar - Icing Mixture
Uses	As a sweetener or ingredient in food processing and food preparation.
Chemical Family	No Data Available
Chemical Formula	C ₁₂ H ₂₂ O ₁₁
Chemical Name	.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled

Redox Ltd
Corporate Office Sydney
Locked Bag 15 Minto NSW 2566 Australia
2 Swettenham Road Minto NSW 2566 Australia
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

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Fax +61 2 9733 3111
E-mail sydney@redox.com
Web www.redox.com
ABN 92 000 762 345

Australia
Adelaide
Brisbane
Melbourne
Perth
Sydney

New Zealand
Auckland
Christchurch
Hawke's Bay
UK
London

Malaysia
Kuala Lumpur
USA
Los Angeles
Oakland
Mexico
Saltillo



Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sucrose	C12H22O11	57-50-1	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Give water to drink. Get medical advice/attention if you feel unwell.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing until all contaminants are washed out completely. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
Advice to Doctor	Treat symptomatically. People with diabetes may need stabilisation.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Combustible, product will burn in surrounding fire situation.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.
Fire and Explosion Hazard	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	With heat, product burns/oxidises to form carbon, carbon monoxide and or carbon dioxide, and smoke. Contain runoff from fire control or dilution water - Runoff may cause pollution.

Special Fire Fighting Instructions

Personal Protective Equipment	Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA) operated in positive pressure mode.
Flash Point	No Data Available
Lower Explosion Limit	25 - 45 g/m3
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	500 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep up material avoiding dust generation; vacuum or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container.
Containment	Stop leak if you can do it without risk. Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	Wash area with water ensuring all wash water is captured and discharged to an approved treatment facility.
Environmental Precautionary Measures	Notify relevant waste or environmental authority as required by the site's EPA licence, trade waste agreement and/or State legislation.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). *Material can ferment if excessive moisture contamination is allowed. Fermentation can yield carbon dioxide with possible traces of ethanol or volatile fatty acids and if exposed to a spark or flame may result in an explosion.
Container	This product should be stored in its factory packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3 (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3 (total); TWA = 3 mg/m3 (respirable). - OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m3 (total); TWA = 5 mg/m3 (respirable).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing

dispersion of it into the general work area. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protection Equipment

- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Approved particulate respirator (refer to AS/NZS 1715 & 1716). Respirators should be correctly fitted, maintained in good condition, and kept in clean storage when not in use.
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side shields, chemical goggles or full face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary to individual circumstances.
- Hand protection: Handle with gloves. Recommended: PVC coated fabric.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Loose comfortable clothing should be worn. Direct skin contact should be avoided by wearing long sleeved shirts and long trousers, a cap or hat.

Special Hazards Precautions

If maintenance of a storage bin/vessel requires entry by personnel, confined space precautions should be complied with. Insufficient oxygen may be present in vessels containing the product due to the generation of gases during fermentation.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Work clothes should be washed regularly. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals, lumps or powder
Odour	Sweet
Colour	White to dark brown
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	160 - 186 °C
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	1.59
Flash Point	No Data Available
Auto Ignition Temp	500 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.

Potential for Dust Explosion	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible, product will burn in surrounding fire situation.
Reactions That Release Gases or Vapours	With heat, product burns/oxidises to form carbon, carbon monoxide and or carbon dioxide, and smoke.
Release of Invisible Flammable Vapours and Gases	Fermentation can yield carbon dioxide with possible traces of ethanol or volatile fatty acids and if exposed to a spark or flame may result in an explosion.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat, flames and other ignition sources.
Materials to Avoid	Incompatible/reactive with oxidising agents.
Hazardous Decomposition Products	Carbon dioxide and carbon monoxide may form when heated to decomposition. Ethanol or volatile fatty acids if fermentation occurs.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: <ul style="list-style-type: none">- Ingestion: No health effects under normal conditions of industrial use, but ingestion may destabilise people with diabetes.- Eye contact: Irritating to the eyes and may cause watering and redness.- Skin contact: Skin contact may result in mild skin irritation. Repeated skin contact may cause dermatitis.- Inhalation: Sugar dust may irritate the nose and throat. Repeated exposure to the powder and dust may result in increased nasal and respiratory secretions and coughing. Chronic effects: No information available.
Acute	
Ingestion	Acute toxicity (Oral): <ul style="list-style-type: none">- LD50, Rat: 29,700 mg/kg (Sucrose).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Non-toxic to aquatic and terrestrial organisms. *Sucrose is an oxygen depleting substance in aquatic environments.
Persistence/Degradability	No information available.
Mobility	No information available.

Environmental Fate	Do not discharge product unmonitored into the environment.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Product can be treated as a common waste for disposal to an organic recycler or into a landfill site/wastewater treatment plant in accordance with relevant authority guidelines. Recycle containers if possible or dispose of in an authorised landfill.
Special Precautions for Land Fill	Transportation of wet sugar waste may require Waste Transport Certification. Refer to your local Environment Protection Authority.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available

	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Sugar
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information No Data Available

Poisons Schedule (Aust) Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code Not Hazardous

National/Regional Inventories

Australia (AIIC) Listed

Canada (DSL) Not Determined

Canada (NDSL) Not Determined

China (IECSC) Not Determined

Europe (EINECS) Not Determined

Europe (REACH) Not Determined

Japan (ENCS/METI) Not Determined

Korea (KECI) Not Determined

Malaysia (EHS Register) Not Determined

New Zealand (NZIoC) Listed

Philippines (PICCS) Not Determined

Switzerland (Giftliste 1) Not Determined

Switzerland (Inventory of Notified Substances) Not Determined

Taiwan (NCSR) Not Determined

USA (TSCA) Not Determined

16. OTHER INFORMATION

Related Product Codes SUGARA1000, SUGARA1001, SUGARA2000, SUGARA3000, SUGARA5000, SUGARA5010, SUGBOT1000, SUGBOT1003, SUGBOT1023, SUGBOT2000, SUGBOT3000, SUGBOT3500, SUGBOT4000, SUGBOT5000, SUGBOT5010, SUGBRO1000, SUGBRO1001, SUGBRO1002, SUGBRO1003, SUGBRO1004, SUGBRO1005, SUGBRO1040, SUGBRO1100, SUGBRO1150, SUGBRO1900, SUGBRO1930, SUGBRO1960, SUGBRO1961, SUGBRO2000, SUGBRO3000, SUGBRO3500, SUGBRO3600, SUGBRO3640, SUGBRO3645, SUGBRO3648, SUGBRO3650, SUGBRO3660, SUGBRO3670, SUGBRO4000, SUGBRO4500, SUGCAS1000, SUGCAS1001, SUGCAS1002, SUGCAS1003, SUGCAS1004, SUGCAS1005, SUGCAS1006, SUGCAS1007, SUGCAS1008, SUGCAS1009, SUGCAS1010, SUGCAS1018, SUGCAS1023, SUGCAS1025, SUGCAS1040, SUGCAS1041,

SUGCAS1045, SUGCAS1100, SUGCAS2000, SUGCAS2001, SUGCAS2200, SUGCAS3000, SUGCAS3100, SUGCAS3200, SUGCAS3400, SUGCAS3450, SUGCAS3500, SUGCAS3510, SUGCAS3600, SUGCAS4000, SUGCAS5000, SUGCOF1000, SUGCOM1000, SUGCOM2000, SUGCOM2001, SUGCOM2002, SUGCON1000, SUGGRA1000, SUGIC1000, SUGIC1001, SUGIC1015, SUGIC1025, SUGICM1000, SUGICM1001, SUGICM1023, SUGICM1040, SUGICM2000, SUGICM4000, SUGICM4010, SUGICM4500, SUGICM4600, SUGMAN0001, SUGMAN0099, SUGMAN1000, SUGMAN1001, SUGMAN1002, SUGMAN1003, SUGMAN1004, SUGMAN1005, SUGMAN1006, SUGMAN1007, SUGMAN1008, SUGMAN1009, SUGMAN1010, SUGMAN1011, SUGMAN1012, SUGMAN1013, SUGMAN1014, SUGMAN1015, SUGMAN1016, SUGMAN1017, SUGMAN1018, SUGMAN1019, SUGMAN1020, SUGMAN1023, SUGMAN1024, SUGMAN1025, SUGMAN1026, SUGMAN1030, SUGMAN1035, SUGMAN1040, SUGMAN1041, SUGMAN1043, SUGMAN1045, SUGMAN1050, SUGMAN1060, SUGMAN1080, SUGMAN1100, SUGMAN1101, SUGMAN1200, SUGMAN1210, SUGMAN1300, SUGMAN1310, SUGMAN1400, SUGMAN1500, SUGMAN1600, SUGMAN1700, SUGMAN1820, SUGMAN1900, SUGMAN1910, SUGMAN1920, SUGMAN2000, SUGMAN2001, SUGMAN2100, SUGMAN2200, SUGMAN2300, SUGMAN2400, SUGMAN2500, SUGMAN2600, SUGMAN2700, SUGMAN2800, SUGMAN2900, SUGMAN3000, SUGMAN3100, SUGMAN3300, SUGMAN3301, SUGMAN3302, SUGMAN3400, SUGMAN3401, SUGMAN3403, SUGMAN3405, SUGMAN3406, SUGMAN3415, SUGMAN3500, SUGMAN3550, SUGMAN3555, SUGMAN3570, SUGMAN3575, SUGMAN3600, SUGMAN3601, SUGMAN3605, SUGMAN3606, SUGMAN3650, SUGMAN3700, SUGMAN3720, SUGMAN3800, SUGMAN4000, SUGMAN4001, SUGMAN4002, SUGMAN4200, SUGMAN4205, SUGMAN4220, SUGMAN4300, SUGMAN4301, SUGMAN4320, SUGMAN4400, SUGMAN4500, SUGMAN4600, SUGMAN4620, SUGMAN4700, SUGMAN4710, SUGMAN4800, SUGMAN4820, SUGMAN4840, SUGMAN5000, SUGMAN5100, SUGMAN5105, SUGMAN5110, SUGMAN5500, SUGMAN5700, SUGMAN6000, SUGMAN6001, SUGMAN6050, SUGMAN6060, SUGMAN6200, SUGMAN6500, SUGMAN7000, SUGMAN7001, SUGMAN8000, SUGORR2000, SUGORR2100, SUGORR2130, SUGORR2200, SUGORR6000, SUGORR6020, SUGRAW1000, SUGRAW1001, SUGRAW1002, SUGRAW1003, SUGRAW1004, SUGRAW1013, SUGRAW1015, SUGRAW1022, SUGRAW1023, SUGRAW1024, SUGRAW1025, SUGRAW1030, SUGRAW1035, SUGRAW1040, SUGRAW1045, SUGRAW1900, SUGRAW2000, SUGRAW3500, SUGRAW3600, SUGRAW4000, SUGRAW4010, SUGRAW4020, SUGRAW5000, SUGRAW5010, SUGSUC1000, SUGSUC1001

Revision

4

Revision Date

01 Jan 2021

Key/Legend

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances**atm** Atmosphere**CAS** Chemical Abstracts Service (Registry Number)**cm²** Square Centimetres**CO₂** Carbon Dioxide**COD** Chemical Oxygen Demand**deg C (°C)** Degrees Celcius**EPA (New Zealand)** Environmental Protection Authority of New Zealand**deg F (°F)** Degrees Farenheit**g** Grams**g/cm³** Grams per Cubic Centimetre**g/l** Grams per Litre**HSNO** Hazardous Substance and New Organism**IDLH** Immediately Dangerous to Life and Health**immiscible** Liquids are insoluable in each other.**inHg** Inch of Mercury**inH₂O** Inch of Water**K** Kelvin**kg** Kilogram**kg/m³** Kilograms per Cubic Metre**lb** Pound**LC₅₀** LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.**LD₅₀** LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.**ltr** or **L** Litre**m³** Cubic Metre**mbar** Millibar**mg** Milligram**mg/24H** Milligrams per 24 Hours**mg/kg** Milligrams per Kilogram**mg/m³** Milligrams per Cubic Metre**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.**mm** Millimetre**mmH₂O** Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight