SAFETY DATA SHEET
SODIUM BICARBONATE
REVISION 5, DATE 11 AUG 22

1. IDENTIFICATION

Product Name	**Sodium Bicarbonate**
Other Names	Baking soda; Bicarbonate of soda; Sodium hydrogen carbonate
Uses	Food/feed applications; Industrial use.
Chemical Family	No Data Available
Chemical Formula	NaHCO3
Chemical Name	Carbonic acid, monosodium salt
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

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)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium bicarbonate	NaHCO3	144-55-8	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention if a large amount is swallowed or if you feel unwell. Never give anything by mouth to an unconscious person.
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 for at least 15 minutes. 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. When symptoms persist or in all cases of doubt, seek medical advice.
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	Non-combustible. *This product will not burn, and can be used as a dry powder extinguishing medium.
Extinguishing Media	If material is involved in a fire, use extinguishing media that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Decomposes on heating, emitting toxic fumes.
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic gases, including oxides of Carbon, oxides of Sodium.

Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material - Sweep up to prevent slipping hazard! Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Pick up and transfer to properly labelled containers for disposal (see SECTION 13). *Do not flush into surface water or sanitary sewer system. Prevent any mixture with an acid into the sewer/drain (gas formation).
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Cover powder spill with plastic sheet or tarp to minimise spreading.
Decontamination	Ventilate area.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. 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. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). To avoid thermal decomposition, do not overheat.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed when not in use. Protect from moisture. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original, properly labelled container.

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; TWA = 3 mg/m3 (respirable dust).
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.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/particulate respirator (refer to AS/NZS 1715 & 1716).

	- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses or goggles. - Hand protection: Handle with gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Dust impervious protective suit.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling, before breaks and at the end of workday. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder or granules
Odour	Odourless
Colour	White
pH	8.0 - 8.5 (1% solution)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	Decomposes
Freezing Point	No Data Available
Solubility	Soluble in water - Insoluble in alcohol
Specific Gravity	2.16 (H2O = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	0.5 - 1.3 kg/dm3
Corrosion Rate	No Data Available
Decomposition Temperature	>50 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	84.01 g/mol
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	No information available.
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	Non-combustible. *This product will not burn, and can be used as a dry powder extinguishing medium.
Reactions That Release Gases or Vapours	Decomposes on heating, emitting toxic fumes, including oxides of Carbon, oxides of Sodium.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Hazardous reactions will not occur under normal circumstances.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid dust formation. Avoid exposure to moisture or moist air. To avoid thermal decomposition, do not overheat.
Materials to Avoid	Incompatible/reactive with acids, Aluminium (tarnishes).
Hazardous Decomposition Products	Decomposes on heating, emitting toxic fumes, including oxides of Carbon, oxides of Sodium. *In moist air, forms sodium carbonate, which is an irritant.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: May cause nausea, vomiting and abdominal pain. Large doses may produce symptomatic alkalosis and expansion in extracellular fluid volume with edema. - Eye contact: Contact may cause irritation due to mechanical abrasion. - Skin contact: Large amounts of dust may cause mechanical irritation or drying of the skin. - Inhalation: Prolonged inhalation of dust may cause respiratory irritation. Chronic effects: Sodium Bicarbonate is not listed as a carcinogen by the Environmental Protection Agency (EPA), the State of California, the National Toxicology Program, or the International Agency for Research on Cancer.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: 4,220 mg/kg
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - Acute LC50, Fish (Oncorhynchus mykiss): 7,100 mg/l (96 h) [flow-through test]. - EC50, Crustacea (Daphnia magna): 4,100 mg/l (48 h) [flow-through test]. - NOEC, Crustacea (Daphnia magna): >576 mg/l (21 d) [semi-static test; OECD Test Guideline 211]. *Not harmful to aquatic life (LC/LL50, EC/EL50 >100 mg/L)
Persistence/Degradability	Product dissociates rapidly to corresponding ions on contact with water.
Mobility	High mobility (water, soil/sediments).
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	Does not bioaccumulate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of via a licensed disposal company and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Sodium bicarbonate
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 (Fiji)

Proper Shipping Name	Sodium bicarbonate
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 (Malaysia)

ADR Code

Proper Shipping Name	Sodium bicarbonate
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 (New Zealand)
NZS5433

Proper Shipping Name	Sodium bicarbonate
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	Sodium bicarbonate
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	Sodium bicarbonate
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	Sodium bicarbonate
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)

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)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	205-633-8
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Listed
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes

SOBICA0300, SOBICA0400, SOBICA0500, SOBICA0600, SOBICA0700, SOBICA0800, SOBICA0900, SOBICA1000, SOBICA1001, SOBICA1002, SOBICA1003, SOBICA1004, SOBICA1005, SOBICA1006, SOBICA1007, SOBICA1008, SOBICA1009, SOBICA1010, SOBICA1011, SOBICA1012, SOBICA1013, SOBICA1014, SOBICA1015, SOBICA1016, SOBICA1100, SOBICA1200, SOBICA1300, SOBICA1400, SOBICA1500, SOBICA1501, SOBICA1502, SOBICA1503, SOBICA1504, SOBICA1550, SOBICA1600, SOBICA1700, SOBICA1717, SOBICA1800, SOBICA1801, SOBICA1802, SOBICA1803, SOBICA1804, SOBICA1805, SOBICA1806, SOBICA1807, SOBICA1808, SOBICA1809, SOBICA1810, SOBICA1811, SOBICA1812, SOBICA1813, SOBICA1814, SOBICA1900, SOBICA1901, SOBICA2000, SOBICA2001, SOBICA2002, SOBICA2003, SOBICA2004, SOBICA2050, SOBICA2051, SOBICA2054, SOBICA2055, SOBICA2056, SOBICA2057, SOBICA2058, SOBICA2060, SOBICA2061, SOBICA2062, SOBICA2065, SOBICA2066, SOBICA2067, SOBICA2070, SOBICA2080, SOBICA2100, SOBICA2101, SOBICA2200, SOBICA2300, SOBICA2400, SOBICA2500, SOBICA2600, SOBICA2650, SOBICA2700, SOBICA2800, SOBICA2900, SOBICA3000, SOBICA3001, SOBICA3002, SOBICA3030, SOBICA3040, SOBICA3045, SOBICA3050, SOBICA3051, SOBICA3070, SOBICA3071, SOBICA3075, SOBICA3076, SOBICA3077, SOBICA3080, SOBICA3100, SOBICA3101, SOBICA3200, SOBICA3201, SOBICA3300, SOBICA3400, SOBICA3401, SOBICA3450, SOBICA3500, SOBICA3501, SOBICA3502, SOBICA3510, SOBICA3513, SOBICA3520, SOBICA3530, SOBICA3535, SOBICA3550, SOBICA3555, SOBICA3599, SOBICA3600, SOBICA3700, SOBICA3800, SOBICA3900, SOBICA4000, SOBICA4001, SOBICA4002, SOBICA4003, SOBICA4004, SOBICA4005, SOBICA4006, SOBICA4010, SOBICA4100, SOBICA4200, SOBICA4300, SOBICA4301, SOBICA4400, SOBICA4401, SOBICA4500, SOBICA4501, SOBICA4600, SOBICA4601, SOBICA4602, SOBICA4603, SOBICA4700, SOBICA4800, SOBICA4850, SOBICA4900, SOBICA5000, SOBICA5100, SOBICA5200, SOBICA5400, SOBICA5410, SOBICA5420, SOBICA5450, SOBICA5555, SOBICA5600, SOBICA5700, SOBICA5800, SOBICA5801, SOBICA5900, SOBICA5901, SOBICA6000, SOBICA6001, SOBICA6002, SOBICA6003, SOBICA6100, SOBICA6101, SOBICA6200, SOBICA6201, SOBICA6202, SOBICA6203, SOBICA6204, SOBICA6205, SOBICA6206, SOBICA6207, SOBICA6208, SOBICA6209, SOBICA6210, SOBICA6211, SOBICA6212, SOBICA6213, SOBICA6214, SOBICA6215, SOBICA6216, SOBICA6217, SOBICA6218, SOBICA6219, SOBICA6220, SOBICA6221, SOBICA6222, SOBICA6223, SOBICA6224, SOBICA6225, SOBICA6226, SOBICA6227, SOBICA6228, SOBICA6229, SOBICA6230, SOBICA6231, SOBICA6232, SOBICA6233, SOBICA6234, SOBICA6235, SOBICA6236, SOBICA6237, SOBICA6300, SOBICA6400, SOBICA6430, SOBICA6500, SOBICA6600, SOBICA6700, SOBICA6701, SOBICA6800, SOBICA6900, SOBICA6901, SOBICA6950, SOBICA7000, SOBICA7100, SOBICA7200, SOBICA7300, SOBICA7410, SOBICA7415, SOBICA7420, SOBICA7421, SOBICA7422, SOBICA7423, SOBICA7424, SOBICA7425, SOBICA7426, SOBICA7430, SOBICA7431, SOBICA7435, SOBICA7436, SOBICA7438, SOBICA7439, SOBICA7440, SOBICA7441, SOBICA7445, SOBICA7450, SOBICA7451, SOBICA7452, SOBICA7453, SOBICA7454, SOBICA7455, SOBICA7460, SOBICA7465, SOBICA7470, SOBICA7475, SOBICA7480, SOBICA7481, SOBICA7490, SOBICA7491, SOBICA7492, SOBICA7500, SOBICA7501, SOBICA7530, SOBICA7531, SOBICA7600, SOBICA7700, SOBICA7701, SOBICA7702, SOBICA7703, SOBICA7704, SOBICA7777, SOBICA7788, SOBICA7800, SOBICA7900, SOBICA8000, SOBICA8100, SOBICA8150, SOBICA8200, SOBICA8300, SOBICA8430, SOBICA8500, SOBICA8777, SOBICA8788, SOBICA8800, SOBICA8900, SOBICA9000, SOBICA9001, SOBICA9002, SOBICA9003, SOBICA9010, SOBICA9400, SOBICA9410, SOBICA9415, SOBICA9430, SOBICA9431, SOBICA9450, SOBICA9500, SOBICA9501, SOBICA9600, SOBICA9700, SOBICA9800, SOBICR0210, SOBICR0211, SOBICR0410, SOBICR0411, SOBICR0810, SOBICR0811, SOBICR1000, SOBICR1010, SOBICR2000, SOBICR3001, SOBICR3002, SOBICR3004, SOBICR3010, SOBICR3025, SOBICR3050, SOBICR3510

Revision

5

Revision Date

11 Aug 2022

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm^2 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/cm^3 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/m^3 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
m^3 Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m^3 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 Heath 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