1. IDENTIFICATION

Product Name	**Sodium Bicarbonate**
Other Names	Bicar; CARBONIC ACID, MONOSODIUM SALT; Sodium bicarb; Sodium hydrogen carbonate
Uses	Food/feed stuff additives, Detergent, Chemical industry,Glass industry, Foaming agents, Water treatment, Environmental protection, Purifying flue gas, Animal feed.
Chemical Family	No Data Available
Chemical Formula	NaHCO3
Chemical Name	Sodium Bicarbonate
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty 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	CH2O3.Na	144-55-8	>=95.00 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. If symptoms persist, seek medical attention.
Eye	Immediately flush eyes with plenty of water holding eyelids open, also under the eyelids. If irritation persists, seek medical attention.
Skin	Remove contaminated clothing. Wash affected area with soap and plenty of water. If irritation persists, seek medical attention.
Inhaled	Remove victim from exposure to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	No information available on medical conditions which are aggravated from exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
Flammability Conditions	Product is a non-flammable solid.
Extinguishing Media	In case of fire, use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Fire and Explosion Hazard	Non-combustible solid
Hazardous Products of Combustion	Carbon oxides, Sodium oxides
Special Fire Fighting Instructions	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
	No Data Available

Hazchem Code

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. Avoid dust formation.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Sweep up to prevent slipping hazard. Transfer to a suitable, labelled waste container and dispose of promptly.
Containment	Stop leak if safe to do so. Isolate the danger area.
Decontamination	Avoid dust formation.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Prevent any mixture with an acid into the sewer/drain (gas formations).
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep away from Incompatible products. Keep at temperature not exceeding: 50 °C (122 °F). This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Store in original packaging as approved by manufacturer. Packaging material: Paper + PE, Polyethylene, Polypropylene, Woven plastic material + PE.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m3 (for inspirable dust) and 3mg/m3 (for respirable dust). NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
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	RESPIRATOR: Respiratory protection that conforms to international/ national standards (AS1715/1716). EYES: Safety goggles (AS1336/1337). HANDS: Wear suitable gloves (AS2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).
Work Hygienic Practices	Do not eat, drink or smoke while using this product. Wash hands before breaks and end of workday. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline Powder
Odour	Odourless
Colour	White
pH	8.4 8.4 g/L
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	300 °C
Freezing Point	No Data Available
Solubility	50 g/l 0°C
Specific Gravity	No Data Available
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	2.16 Kg/dm3
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	Solubility(ies): 69 g/l (Water) Temperature: 0 °C (32 °F) : 93 g/l (Water) Temperature: 20 °C (68 °F) : 165 g/l (Water) Temperature: 60 °C (140 °F) : Other : slightly soluble : Alcohol pH: 8.4 (Water Concentration: 8.4 g/l at 25 Deg C 8.6 Concentration: 52 g/l at 25 Deg C
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available

Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions. Keep at temperature not exceeding 50 Deg C.
Conditions to Avoid	Exposure to moisture, do not overheat to avoid thermal decomposition.
Materials to Avoid	Strong acids, Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides, Sodium oxides
Hazardous Polymerisation	Has not been reported.

11. TOXICOLOGICAL INFORMATION

General Information	LD50 Oral - rat - 4,220 mg/kg Skin corrosion/irritation Skin - Human Result: Mild skin irritation - 3 d Serious eye damage/eye irritation Eyes - rabbit Result: Mild eye irritation - 30 s No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
EyeIrritant	Dust contact with the eyes can lead to mechanical irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Inhalation	In case of higher concentration: slight irritation.
SkinIrritant	Repeated or prolonged exposure: Contact with dust can cause mechanical irritation or drying of the skin.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Acute Toxicity Fishes, Oncorhynchus mykiss, LC50: 7700 mg/L/96 h Fishes, Oncorhynchus mykiss, NOEC: 2300 mg/L/96 h Fishes, Lepomis macrochirus, LC50: 7100 mg/L/96 h Fishes, Lepomis macrochirus, NOEC: 5200 mg/L/96 h Crustaceans, Daphnia magna, EC50: 4100 mg/L/48 h Crustaceans, Daphnia magna, NOEC: 3100 mg/L/48 h Chronic Toxicity Crustaceans, Daphnia magna, NOEC: > 576 mg/L/21 d
Persistence/Degradability	Abiotic degradation: Water, hydrolyses Result: acid/base equilibrium as a function of pH. Degradation Products: Carbonic acid/bicarbonate/carbonate Biodegradation Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility	High mobility in water and soil/sediments.
Environmental Fate	Avoid contaminating waterways, drains and sewers.
Bioaccumulation Potential	Does not bioaccumulate

Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations.All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Where possible recycling is preferred to disposal or incineration. Clean container with water. Dispose of rinse water in accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities

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

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

Land Transport (Malaysia)
ADR

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

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

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

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

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

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 (AICS)	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	SOBICR1000, SOBICR2000, 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, SOBICA1600, SOBICA1700, SOBICA1800, SOBICA1900, SOBICA1901, SOBICA2000, SOBICA2001, SOBICA2002, SOBICA2003, SOBICA2004, SOBICA2100, SOBICA2101, SOBICA2200, SOBICA2300, SOBICA2400, SOBICA2500, SOBICA2600, SOBICA2700, SOBICA2800, SOBICA2900, SOBICA3000, SOBICA3001, SOBICA3002, SOBICA3100, SOBICA3200, SOBICA3201, SOBICA3300, SOBICA3400, SOBICA3500, SOBICA2650, SOBICA3600, SOBICA3700, SOBICA3800, SOBICA3900, SOBICA4000, SOBICA4001, SOBICA4002, SOBICA4003, SOBICA4004, SOBICA4005, SOBICA4006, SOBICA4100,

SOBICA4200, SOBICA4300, SOBICA4301, SOBICA4400, SOBICA4401, SOBICA4500, SOBICA4501, SOBICA4600, SOBICA4601, SOBICA4602, SOBICA4603, SOBICA4700, SOBICA4800, SOBICA4900, SOBICA5000, SOBICA5100, SOBICA5400, 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, SOBICA6500, SOBICA6600, SOBICA6700, SOBICA6701, SOBICA6800, SOBICA6900, SOBICA6901, SOBICA7000, SOBICA7100, SOBICA7200, SOBICA7500, SOBICA7501, SOBICA7600, SOBICA7700, SOBICA7701, SOBICA7702, SOBICA7703, SOBICA7704, SOBICA7800, SOBICA7900, SOBICA8000, SOBICA8100, SOBICA8200, SOBICA8300, SOBICA8500, SOBICA8800, SOBICA8900, SOBICA9000, SOBICA9001, SOBICA9002, SOBICA9003, SOBICA9500, SOBICA9501, SOBICA9600, SOBICA9700, SOBICA7300, SOBICA3101, SOBICA4010, SOBICA1801, SOBICA1802, SOBICA1803, SOBICA1804, SOBICA1805, SOBICA1806, SOBICA1807, SOBICA1808, SOBICA1809, SOBICA1810, SOBICA1811, SOBICA1812, SOBICA1813, SOBICA1814, SOBICR0210, SOBICR0410, SOBICA3535, SOBICA5450, SOBICA6950, SOBICA7410, SOBICA7420, SOBICA7430, SOBICA7440, SOBICA7450, SOBICR3001, SOBICR3002, SOBICR3004, SOBICR3010, SOBICR3025, SOBICR3050, SOBICR3510, SOBICA8150, SOBICA1717, SOBICA1550, SOBICA7421, SOBICA7431, SOBICA7425, SOBICA7451, SOBICA7432, SOBICR0810, SOBICA7422, SOBICA7423, SOBICA7424, SOBICA3401, SOBICA7452, SOBICA7426, SOBICA7433, SOBICA7453, SOBICA7454, SOBICA7434, SOBICA7455, SOBICA7460, SOBICA3501, SOBICA4850, SOBICA9800, SOBICA5200, SOBICA7465, SOBICA7470, SOBICA3502, SOBICA7480, SOBICA7490, SOBICA7491, SOBICA7481, SOBICA7492, SOBICA7415, SOBICA3510, SOBICA3520, SOBICA7435, SOBICA7436, SOBICA2050, SOBICA2060, SOBICA7439, SOBICA7441, SOBICA2055, SOBICA2065, SOBICA2061, SOBICA5402, SOBICA2070, SOBICA3513, SOBICA7437, SOBICA7438, SOBICA2051, SOBICA7442, SOBICR1010

Revision 3

Revision Date 16 Jun 2014

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 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