1. IDENTIFICATION

Product Name	**Sodium Disilicate Britesil**
Other Names	SILICIC ACID, SODIUM SALT; Sodium Silicate; Sodium Silicate, Glass; Sodium Siliconate
Uses	General purpose industrial chemical for use in a wide range of applications. Binding agent; corrosion inhibitor; dust binding agent; flame retardant or fire preventing agent; floatation agent; stabiliser; viscosity control agent; Intermediate.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Sodium Disilicate Britesil
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		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories		Serious Eye Damage/Irritation - Category 1	
		Skin Corrosion/Irritation - Category 2	
		Specific Target Organ Toxicity (Single Exposure) - Category 3	
Pictograms			
Signal Word		Danger	
Hazard Statements		**H315**	Causes skin irritation.
		H318	Causes serious eye damage.
		H335	May cause respiratory irritation.
Precautionary Statements	Prevention	**P261**	Avoid breathing dust.
		P262	Do not get in eyes, on skin, or on clothing.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	**P303 + P361 + P353**	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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)	

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	**6.1D**	Substances that are acutely toxic - Harmful
		8.2C	Substances that are corrosive to dermal tissue UN PGIII
		8.3A	Substances that are corrosive to ocular tissue
	Environmental Hazards	**9.3C**	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Silicic Acid, Sodium Salt	No Data Available	1344-09-8	>75.0 %
Water	No Data Available	7732-18-5	<25.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	DO NOT induce vomiting. Wash out mouth with water and give 200-300ml (half a pint) of water to drink. Obtain medical attention.
Eye	Irrigate with eyewash solution or clean water, holding the eyelids apart for at least 15 minutes. Obtain immediate medical attention.
Skin	Wash affected skin with plenty of water. If symptoms develop, obtain medical attention.
Inhaled	Remove patient from exposure to fresh air. Keep warm and at rest. Obtain medical attention.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	Irritating to respiratory system and skin. The toxicity of sodium silicate is dependant on the silica to alkali ratio and on the pH.

5. FIRE FIGHTING MEASURES

Flammability Conditions	Product is a non-flammable solid.
Extinguishing Media	In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.
Hazardous Products of Combustion	Non-combustible solid. Incompatible materials are unknown. Hazardous decomposition products are unknown.
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). 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. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
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	Personnel involved in the clean up should wear full protective clothing as listed in section 8. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Caution - spillages may be slippery.
Clean Up Procedures	Caution - Spillage may be slippery. Avoid generation of dust. Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal.
Environmental Precautionary Measures	Do not allow to enter drains, sewers or water courses. Advise authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.
Personal Precautionary Measures	Wear suitable protective clothing. Wear eye/face protection. An approved dust mask should be worn if dust is generated during handling.

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. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Unsuitable Containers: Aluminium.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, an exposure limit of 2mg/m3 (15 min TWA) is recommended by analogy with sodium hydroxide. DERIVED NO EFFECT LEVEL (DNEL) Oral Inhalation Dermal mg/Kg bw/d mg/m3 mg/Kg bw/d _____ Workers - Acute - Systemic Effects - - - Workers - Acute - Local Effects - - - Workers - Long Term - Systemic Effects - 5.61 1.59 Workers - Long Term - Local Effects - - - Consumers - Acute - Systemic Effects - - - Consumers - Acute - Local Effects - - - Consumers - Long Term - Systemic Effects 0.80 1.38 0.80 Consumers - Long Term - Local Effects - - - _____
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.
Personal Protection Equipment	RESPIRATOR: Wear suitable respiratory protective equipment where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716). EYES: Chemical goggles (AS1336/1337). HANDS: Wear suitable protective gloves (plastic or rubber). For example, Level 6 breakthrough time (>480min). CLOTHING: Long-sleeved protective coveralls and safety footwear (AS3765/2210).
Work Hygienic Practices	Do not eat, drink or smoke at the work place.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granules
Odour	Odourless
Colour	White
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	>1000 °C
Freezing Point	>1000 °C
Solubility	Soluble 25°C
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
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 Data Available
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	Aqueous solutions will react with aluminum, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air.
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	Product is stable under normal conditions of use, storage and temperature.
Conditions to Avoid	Avoid excessive heat, direct sunlight, generating dust, moisture, static discharges, open flame and high temperatures.
Materials to Avoid	Incompatible materials are unknown.
Hazardous Decomposition Products	Hazardous decomposition products are unknown.
Hazardous Polymerisation	When arc welding vessels containing aqueous solutions of this material, take care to control an explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin, and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.

11. TOXICOLOGICAL INFORMATION

General Information	All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 Rat: 3400mg/Kg bw. Inhalation LC50 Rat: >2.06g/m3 Dermal LD50 Rat: >5000mg/Kg bw Sensitisation: Not sensitising Mutagenicity: No evidence of genotoxicity. In vitro/in vivo negative. Carcinogenicity: No structural alerts. Reproductive Toxicity: No evidence of reproductive toxicity or developmental toxicity. STOT Single Exposure: Irritating to respiratory system. STOT Repeated exposure: Repeated dose oral studies were not associated with any evidence of systemic target organ toxicity NOAEL Oral Rat: >159mg/Kg bw/d Aspiration Hazard: Not classified.
Mutagenicity	No evidence of genotoxicity. In vitro/in vitro negative.
Carcinogenicity	No structural alerts.

Sensitisation	Not sensitising.
Reproduction	No evidence of reproductive toxicity or developmental toxicity.

Acute

EyeIrritant	Material will cause severe irritation. Risk of serious damage to eyes.
Ingestion	All symptoms of acute toxicity are due to the high alkalinity. Material will cause irritation. Oral LD50 (rat) 3400 mg/kg bw
Inhalation	Dust is irritant to the respiratory tract. All symptoms of acute toxicity are due to the high alkalinity. Inhalation LC50 (rat) >2.06g/m3
SkinIrritant	Material will cause irritation. Dermal LD50 (rat) >5000 mg/kg bw.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish (Brachydanio Rerio) LC50/96hr : 1108mg/L Aquatic Invertibrates (Daphnia Magna) EC50/48hr: 1700mg/L Results of PBT and vPvB Assessment: Not classified as PBT or vPvB Other Adverse effects: The alkalininty of this material will have a local effect on ecosystems senstitive to changes in pH.
Persistence/Degradability	Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.
Mobility	No information available on mobility for this product. Soluble
Environmental Fate	Do NOT let product reach waterways, drains and sewers. The primary hazard of sodium silicate is the alkalinity. Avoid generation of dust.
Bioaccumulation Potential	Inorganic. The substance has no potential for bioaccumulation.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Discharge of this product to sewage treatment works is dependent on local regulations with regard to pH controls. Dispose of this material and its container to hazardous or special waste collection point. This material is classified as hazardous and should be disposed in accordance with local, national legislation.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	SODIUM DISILICATE BRITESIL
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 DISILICATE BRITESIL
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 DISILICATE BRITESIL
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 DISILICATE BRITESIL
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 DISILICATE BRITESIL
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 DISILICATE BRITESIL
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	HSR004696

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	215-687-4
Europe (REACh)	01-2119448725-31-0011
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)	Listed

16. OTHER INFORMATION

Related Product Codes	SODISI6000, SODISI6001, SODISI6002, SODISI6020, SODISI6100, SODISI6900, SODISI7000, SODISI7001, SODISI7100
Revision	2
Revision Date	01 Aug 2014
Reason for Issue	Update sds
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