1. IDENTIFICATION

Product Name	**Styrene-butadiene Rubber (SBS)**
Other Names	Styrene, 1,3-butadiene polymer; Styrene-butadiene copolymer
Uses	Asphalt road pavement; Solvent-based & Hot-melt adhesive.
Chemical Family	No Data Available
Chemical Formula	(C8H8.C4H6)x
Chemical Name	Benzene, ethenyl-, polymer with 1,3-butadiene
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)	
Hazard Categories		Serious Eye Damage/Irritation - Category 2B	
Signal Word		Warning	
Hazard Statements		**H320**	Causes eye irritation.
Precautionary Statements	Prevention	**P264**	Wash hands and face thoroughly after handling.
	Response	**P305 + P351 + P338**	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313	If eye irritation persists: Get medical advice/attention.

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
Styrene-butadiene rubber (SBS)	Unspecified	9003-55-8	>98 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed: Rinse mouth with water. Call a Poison Centre or doctor/physician if you feel unwell. Do NOT induce vomiting unless advised to do so by a medical professional.
Eye	Eye contact: Do NOT rub - Immediately flush eyes with running water for several minutes, occasionally lifting the upper and lower eyelids. 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	Skin contact: Remove material from skin immediately. Flush skin with running water for at least 15 minutes; wash with plenty of soap and water. Take off contaminated clothing and wash 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. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Call a Poison Centre or doctor/physician if experiencing respiratory symptoms, or if you feel unwell.
Advice to Doctor	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	Keep unauthorised personnel away. If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out.
Flammability Conditions	May burn but does not ignite readily.
Extinguishing Media	In case of fire: Use dry chemical, Carbon dioxide, regular foam extinguishing agent or water spray for extinction. Do

	NOT use high volume water jet.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	May emit flammable vapour if involved in fire.
Special Fire Fighting Instructions	No information available.
Personal Protective Equipment	Wear self contained breathing apparatus (SCBA) and protective clothing.
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 - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flame). Do not touch or walk through spilled material. Avoid breathing dust/mist/vapours. Avoid contact with eyes and skin.
Clean Up Procedures	Move containers away from the leak/spill area. Use clean, non-sparking tools to collect material and place it into suitable containers for later disposal in accordance with local regulations.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent runoff and contact with waterways, drains or sewers.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	See Section 8 for recommended personal protective clothing/equipment.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash fountains should be provided within the immediate work area for emergency use. Handle in accordance with good industrial hygiene and safety practice. Use only in a well-ventilated area. Take precautionary measures against static discharge. Avoid breathing dust/mist/vapours. Avoid contact with eyes and skin. See Section 8 for recommended personal protective clothing/equipment. - Emptied containers retain product residue; follow all safety warnings even after container is emptied.
Storage	Store in a cool, dry, well-ventilated place. Keep container tightly closed when not in use - Check regularly for leaks. Keep away from combustible materials, heat/hot surface and ignition sources (no smoking, flares, sparks or flames). Avoid accumulation of electrostatic charge.
Container	Keep in the original container - Do NOT store in damaged containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Contains no substances with occupational exposure limit values. For dusts from solid substances without specific occupational exposure standards: - 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. Adequate ventilation should be provided so that exposure

	limits are not exceeded.
Personal Protection Equipment	Respiratory protection: In case of frequent use or heavy exposure, respiratory protection is recommended. In order from minimum to maximum protection: Any air-purifying respirator with a particulate filter of high efficiency; Any supplied-air respirator (for dust/mist/fume-purifying); Self-contained breathing apparatus with a particulate filter of high efficiency. For unknown or IDLH concentrations: Any supplied-air respirator with full-facepiece, operated in pressure-demand or other positive-pressure mode, in combination with a separate escape supply; Any self-contained breathing apparatus with a full-facepiece. Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Splash-resistant safety goggles with secondary protection face-shield. Hand protection: Handle with gloves. No recommendation. Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Anti-static clothing and footwear.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do NOT eat, drink or smoke when using this product. Wash hands and face thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Solid
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	No Data Available
Freezing Point	No Data Available
Solubility	Insoluble in water
Specific Gravity	0.91 - 0.97
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 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	May burn but does not ignite readily.
Reactions That Release Gases or Vapours	No information available.
Release of Invisible Flammable Vapours and Gases	May emit flammable vapour if involved in fire.

10. STABILITY AND REACTIVITY

Chemical Stability	This material is stable under recommended storage and handling conditions.
Conditions to Avoid	Keep away from heat/hot surface and ignition sources (no smoking, flares, sparks or flames). Take precautionary measures against electrostatic discharge.
Materials to Avoid	Keep away from combustible materials.
Hazardous Decomposition Products	May emit flammable vapour if involved in fire.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: No information available. - Inhalation: No information available. - Eye contact: Causes eye irritation. - Skin contact: No information available. Carcinogenicity: Styrene-butadiene copolymers (CAS No. 903-55-8) are listed in IARC Group 3 - Not classifiable as to its carcinogenicity to humans.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent runoff and contact with waterways, drains or sewers.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations. Dispose by incineration. If possible, pre-process with water separation.
Special Precautions for Land Fill	Contaminated packaging: Emptied containers retain product residue; follow all safety warnings even after container is

emptied.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	Styrene-butadiene Rubber (SBS)
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	Styrene-butadiene Rubber (SBS)
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	Styrene-butadiene Rubber (SBS)
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	Styrene-butadiene Rubber (SBS)
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	Styrene-butadiene Rubber (SBS)
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	Styrene-butadiene Rubber (SBS)
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)	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)	KE-13258
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	POLSBS1800, POLSBS1900, POLSBS2000, POLSBS2050, POLSBS2051, POLSBS2100, POLSBS2101, POLSBS2200, POLSBS4000, POLSBS5000, POLSBS5300, POLSBS7000, POLSBS7050, POLSBS7051, POLSBS7100, POLSBS7150, POLSBS7500, POLSBS7700
Revision	3
Revision Date	29 Jun 2017
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