MATERIAL SAFETY DATA SHEET Page 1 of 7 Product: BORE REVIVER Date of Issue: 2 September 2019 Operation CALMARC CHEMICALS MANUFACTURING INDUSTRIAL CHEMISTS 16 GOONGARRIE ST, BAYSWATER WA 6053 TELEPHONE: Bus. (08) 93782022, Mobile: 0418 956 860 A/H (08) 9381 5052 Facsimile: (08) 9377 2575 A.C.N 009 026 386. ABN 18 340 289 669

THIS PRODUCT IS A HAZARDOUS SUBSTANCE AS DEFINED BY SAFE WORK AUSTRALIA

SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Manufacture Code: Emergency Telephone No:	Bore Reviver BORE (08) 9378 2022 0408 940 669 (08) 9381 5052 13 11 26(all hours)
Email:	accounts@calmarc.com.au
Creation Date:	18 October 2016
SDS Responsibility:	Calmarc Chemical's Technical Sales (08) 9378 2022 0408 940 669
Other Information:	This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification of further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibilities for products sold are subject to our standard terms and conditions. A copy of our terms and conditions and technical information pamphlets are available upon request. DISCLAIMER This information is based on the present level of knowledge about safety requirements not specific properties. The listed data is therefore subject to change and revision without notice and cannot be guaranteed. No warranty expressed or implied is made as to accuracy, reliability or completeness of the detail in this document.

SECTION 2 - HAZARDS INFORMATION/EMERGENCY OVERVIEW

Globally Harmonised System Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of classification and labelling of Chemicals (GHS).
Signal Word	DANGER
Physical Data	Product is corrosive.
ACUTE HEALTH EFFECTS Swallowed	Toxic if swallowed. May cause nausea, vomiting and intense thirst. Causes severe burns to the mouth, throat and stomach. May cause immediate pain and ulceration to all membranes and tissues. Corrosion of the stomach may lead within a few hours or a few days to gastric perforation and peritonitis. Late oesophageal, gastric and pyloric strictures and stenoses should be anticipated.

MATERIAL SAFETY DATA SHEET Page 2 of 7 Product: BORE REVIVER Date of Issue: 2 September 2019 **CALMARC CHEMICALS** MANUFACTURING INDUSTRIAL CHEMISTS 16 GOONGARRIE ST, BAYSWATER WA 6053 TELEPHONE: Bus. (08) 93782022, Mobile: 0418 956 860 A/H (08) 9381 5052 Facsimile: (08) 9377 2575 A.C.N 009 026 386. ABN 18 340 289 669 CALMARC Eye Causes burns. May cause extensive necrosis of the conjunctiva and corneal epithelium, resulting in perforation or opaque scarring. Skin Causes burns. May cause immediate pain and ulceration of all membranes and tissues. Inhalation Irritating to the mucous membranes and respiratory tract. Chemical pneumonitis can be expected after respiratory exposure to acid vapours or after tracheobronchial aspiration and ingested acid. Death may occur due to complication such as circulatory shock, asphyxia due to gottic or laryngeal adema, perforation of the stomach with peritonitis, gastric haemorrhage, infection or

Chronic Prolonged exposure may cause bronchitis, pneumonia and pulmonary oedema.

anition due to stricture formation.

SPECIAL HEALTH EFFECTS Environmental

Do not allow products to enter drinking water, rivers and streams as it may harm vegetation and wildlife.

GHS Classification	Pictogram	Hazard Statement
Corrosive Category 1 & 1B	P	H314 – Causes severe skin burns and eye damage.
	<u> </u>	
Specific Target Organ Toxicity Category 3		H331 – Toxic if inhaled.

GENERAL		
	P101 P102 P103	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.
PREVENTATIVE		
	P234 P260 P261 P264 P271 P280	Keep only in original container. Do not breathe dust/fumes/gas/mist/vapours/spray. Avoid breathing vapours/spray. Wash face, hands and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing and eye/face protection.

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P304 + P340		omovo vi		
P331 P321 P301 + P330 + P331 P303 + P361 + P353 P363 P310 P305 + P351 + P338 P390	comfortable for breathing. Call a POISON CENTRE or doctor. Specific treatment (see this PDS)			
STORAGE				
P410 + P403 P233 P405 P406 P402	Keep container Store locked up	tightly cl ve resista		place. ner with a resistant liner.
DISPOSAL				
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.			
	Health Hazards Environmental Hazards	6.1B 8.1A 8.2B 8.3A 9.1D 9.3C	Substances that are c Substances that are c	orrosive to metals orrosive to dermal tissue orrosive to ocular tissue latic environment
SECTION	N 3 – COMPOSI	TION/IN	FORMATION ON INGRI	EDIENTS
INGREDIENTS			CAS No.	CONCENTRATION
Hydrochloride salt Tensides(surfactants) Water			506-89-8 7732-18-5	10-30% m/m 10-30% m/m 30-60% m/m
	S	ECTION	4 – FIRST AID MEASU	RES
Swallowed	Immed	diately rir	nse mouth with water. G	ive plenty of water to drink. occurs, give more water to

DO NOT induce vomiting. If vomiting occurs, give more water to achieve effective dilution. Seek medical assistance. Poisons information Telephone 13 11 26(all hours).

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16 TELEPHONE: Bu	UFACTURING INDUSTRIAL CHEMISTS 6 GOONGARRIE ST, BAYSWATER WA 6053 us. (08) 93782022, Mobile: 0418 956 860 A/H (08) 9381 5052 9) 9377 2575 A.C.N 009 026 386. ABN 18 340 289 669
Eye	Immediately irrigate with copious amounts of water for at least minutes. Hold eyelids open while rinsing. Seek immedi medical assistance.
Skin	Immediately wash contaminated skin area with plenty of wa Remove contaminated clothing and wash if being reused. So medical attention. Treat skin with 1% Sodium Bicarbon solution to neutralise acid residue.
Inhalation	Remove patient form contaminated area. Loosen clothing. Ke patient warm and relaxed until full recovery. If breathing labour and patient cyanotic (blue), ensure airways are clear and he trained person give oxygen through a facemask. If breathing stopped, apply artificial respiration. If cardiac arrest occurs ap external cardiac massage. Seek medical advice if sympto persevere.
Advice to Doctor	Treat symptomatically as for strong acids.
SE	ECTION 5 – FIRE FIGHTING MEASURES
Fire and Explosion	Not combustible but slippery when wet. Severe fire: use wate water fog.
Ventilation	Use only in a well-ventilated area. Mechanical ventilation forced draught over the work area is recommended. Av generating or inhaling mists or aerosols. Keep away from glass
Autoignition Temperature	Does not ignite.
Source of Ignition	Does not ignite.
Flash Point	Not Flammable.
Extinguishing Media	Water fog, water spray.
	Wear and resistant chemical calach quit
	Wear acid resistant chemical splash suit.
Fighting Procedures	Severe fire, after evaporation, emits toxic acid fumes.
Fighting Procedures Decomposition Products	
Special Fire Fighting Procedures Decomposition Products Reactivity Protection of Firefighters	Severe fire, after evaporation, emits toxic acid fumes. The solution is a strong acid and will react violently with met

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills and Disposal Slippery when wet. Use hydrated lime or alkalies to neutralise. Place the excess hydrated lime used for neutralisation in a plastic bag and dispose at an industrial tip site. Mop up the remaining residue and wash to waste. Avoid washing into waterways. Rinse area with water and collect using a mop or wet vacuum cleaner. Launder all contaminated clothing or wiping rags before re-use. **Cleaning Protection** Open up the area where spill or leak has occurred to ventilate direct vapours away. Have absorbents, such as vermiculite, attapulgite, cardboard or sand on hand to control flow of the spilled mobile product. Use wet vacuum cleaner or mop to collect any small spills. **SECTION 7 – HANDLING AND STORAGE Protection against** Keep containers on site away from sources of heat, sparks and earth if necessary, for static electricity. Use secure locked storage explosions and fires if possible and have forced or natural ventilation over worksite or storage areas. Packages The product is supplied in high density polypropylene bottles, jerry cans or cubes. Packaging group type II and III. Keep containers securely sealed, clean protected against Storage physical damage. Store in a cool place away from heat. BORE REVIVER is corrosive to steel, copper, aluminium and metals in general. It is incompatible with glass and materials containing silica. Keep away from children. SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION Exposure Limits The ingredients of which components with established Safe Work

Australia exposure standards are listed below. Other ingredients do not have established NOHSC exposure standards.

INGREDIENTS	TWA (Time Weighed Average)	STEL (Short Term Exposure Limit)
Hydrochloric Acid (trace amounts)	5ppm 7.5 mg/m ³ Peak limitation	2 mg/m ³
Engineering Measures	Use only in a well-ventilated	area. Mechanical ventilation or

Use only in a well-ventilated area. Mechanical ventilation or forced draught over the work area is recommended. Avoid generating or inhaling mists or aerosols. Keep away from metals.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection Wear safety glasses, goggles or preferably a face shield. In enclosed non-ventilated areas, an air line to full head cover helmet with mask may be necessary. Breathing mask to be suitable for organic vapours.

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Skin/Body ProtectionWear nitrile or PVC gloves for 8-hour day. Short-term protection
(1 hour), natural rubber is suitable. Wear full coverall clothing
protection with safety boots.Hygiene MeasureWash hands before meal breaks and at the end of a work period.
Any contaminated clothing should be removed. Avoid inhaling any
fumes on a long-term basis.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Formulation blend of chemicals Substance Physical Form Low viscosity liquid Colour Light yellow clear liquid Odour Trace рΗ 1.0 +/- 0.2 **Boiling Point** >100°C at 100 kPa Melting Point Not Applicable Flash Point Not Applicable Freezing Point Approx. 0°C Autoignition Does not ignite. Water Solubility Infinite Vapour Pressure Not Known Vapour density Not Known Specific Gravity 1.2 g/cc @ 25°C Corrosivity **Corrosive Class 8**

SECTION 10 – STABILITY AND REACTIVITY

Stability	Stable as supplied at normal (average) atmospheric temperatures.
Reactivity	Strong acid. Reacts violently with bases, oxidants and metals.
Decomposition Products	Severe fire, after evaporation, emits toxic acid fumes.

SECTION 11 – TOXICOLOGICAL INFORMATION

For Hydrochloric Acid Immediate	Oral-Rabbit LD ₅₀ : 900 mg/kg Inhalation-human LC _{LO} : 1300ppm/30 minutes Inhalation-human LC _{LO} : 3000ppm/5 minutes
Delayed (Subchronic and Chronic) Effects	Exposure to concentrations over 1000 ppm may cause headache, irritation of the eyes, nose, throat, and, if continued, drowsiness and lassitude, loss of appetite, and inability to concentrate. There is no concrete evidence that repeated exposure to vapour results in cirrhosis of the liver. Ingestion of large doses can cause alcohol poisoning. Repeated ingestion can lead to alcoholism.
Other data	None

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SECTION 12 – ECOLOGICAL INFORMATION

None known.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal

Allow absorbents to dry out in the open atmosphere. Contaminated product should be reprocessed by an approved organisation. Place any dried absorbent in plastic bags, seal and dispose at an approved site.

SECTION 14 – TRANSPORT INFORMATION

Acid Solution-Category 1 & 1B

Shipping Name Dangerous Goods Code Subsidiary Risk **UN Number** Packaging Group I.E.R.G. No. HAZCHEM

8 None 1760 II or III 40

SECTION 15 – REGULATORY INFORMATION

POISON SCHEDULE

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SECTION 16 – OTHER INFORMATION

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product.

Directions for use are on the label and brochure describing Bore Reviver.

SDS NEXT REVIEW DATE 2 September 2024

END OF SDS FOR BORE REVIVER