


SAFETY DATA SHEET

ALPHA

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER	
Product Name:	Alpha
Other Names:	Aqueous Solution: Sodium hydroxide, Potassium hydroxide
Recommended Use:	Boiler water treatment
Part Nos.:	ALPHA-20, ALPHA-200, ALPHA-1000
Supplier:	Spirax Sarco Limited 6 Nandina Avenue, East Tamaki, Auckland, New Zealand. Ph: 09 263 3674 Email: wt@nz.spiraxsarco.com
Emergency numbers	<ul style="list-style-type: none"> - New Zealand Ambulance/Police/Fire: Dial 111 - New Zealand Poisons Information Centre: Dial 0800 POISON (0800 764 766) - Australian Police and Fire Brigade: Dial 000 - Australian Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia) - Spirax Sarco NZ 24 hours Emergency: Dial 027 475 2626

SECTION 2 HAZARDS IDENTIFICATION	
Classification:	Classified as hazardous according to criteria in the NZ EPA Hazardous Substances (Hazard Classification) Notice 2020 Signal Word: DANGER Hazardous Substance according to the criteria of NOHSC Australia. C Corrosive
Pictograms:	
Risk Phrase(s)	R35 Causes severe burns.
Safety Phrase(s)	S1/2 Keep locked up and out of the reach of children. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).
Hazard Classification:	HSNO GHS Equivalent 6.1D Acute oral toxicity Category 4 8.1A Corrosive to metals Category 1 8.2B Skin corrosion Category 1B 8.3A Serious eye damage Category 1 9.1D Hazardous to the aquatic environment chronic Category 4 9.3B Hazardous to terrestrial vertebrates

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS					
Chemical Identity	CAS Number	Proportion, %	LD50 Oral (Rat)	WES TWA, mg/m ³	WES STEL, mg/m ³
Sodium hydroxide	1310-73-2	30-60	140-340 mg/kg	2	Not available
Potassium Hydroxide	1310-58-3	1-10	273 mg/kg	2	Not available
Non hazardous Ingredients	Not applicable	to 100	>5000 mg/kg	Not available	Not available

SECTION 4 FIRST AID MEASURES	
Inhalation:	Remove to fresh air, administer artificial respiration if needed. Seek medical attention.
Ingestion:	Do not induce vomiting. Give large amounts of water and milk or milk of magnesia. Seek medical attention immediately. Never give anything by mouth to an unconscious person.
Skin:	Flush the contacted area thoroughly with clean water. Remove contaminated clothing. Seek medical attention if irritation occurs.
Eyes:	Immediately flush eyes with clean water for 15 minutes. Seek medical attention.
Medical Attention and Treatment:	Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES	
Extinguishing Media:	Water spray, fog or mist. Foam. Carbon Dioxide (CO ₂). Dry Powder.
Combustion Products - Hazards:	May produce fumes containing carbon dioxide and carbon monoxide.
Protective Measures In Fire:	Wear full protective clothing and use self-contained breathing apparatus.
HAZCHEM Code:	2R

SECTION 6 ACCIDENTAL RELEASE MEASURES	
Emergency Procedures:	For a major spill, prevent spillage from entering drains or watercourses. Evacuate the spill area. Call the Fire Brigade.
Spill Cleanup Methods:	Wear appropriate personal protection equipment (Refer to Section 8). Stop leak if safe to do so, and contain spill. Neutralise with dilute acid and absorb onto sand, vermiculite or other suitable absorbent material. Sweep up or shovel into labelled containers for disposal. After spills, wash the area preventing runoff from entering drains. If material enters drains, advise emergency services. Dispose of only in accordance with all regulations.

SECTION 7 HANDLING AND STORAGE	
Usage Precautions:	Handle with care. Avoid spilling. Avoid skin and eye contact. Provide adequate ventilation. Do not allow product to come into contact with acids. Do not allow contact with ammonium salts, aluminium, tin, zinc or magnesium.
Storage Precautions:	Store in cool dry place away from direct sunlight. Keep in original containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION	
National Exposure Limits:	No specific guidelines for this product. See Section 3 for exposure limits of each ingredient if product is a mixture.
Biological Limits:	No specific guidelines for this product. <i>Please note:</i> Calculating exposure limits on mixtures requires professional judgement to determine if the results are appropriate to the specific combination of ingredients. Occasionally certain chemical mixtures contain components that may act upon the same organ system. The combined health effects may be additive. See Section 3 for exposure limits of each ingredient if product is a mixture.
Engineering Controls:	For normal use, general room ventilation is adequate. In confined spaces or high use areas, maintain adequate ventilation by suitable extraction or wear a respirator.
Personal Protective Equipment	<ul style="list-style-type: none"> - Ventilation: No special requirements under normal use. Handling should take place in a well ventilated area. - Respirators: No special requirements under normal use. If exposure to spray, mist or vapours is possible, wear a face mask respirator with appropriate cartridge. - Protective Gloves: Wear impermeable protective gloves when handling. - Eye Protection: Wear approved safety glasses, goggles or face shield. - Other Protection: Wear appropriate clothing to prevent any possibility of skin contact such as coveralls, rubber/PVC apron, PVC boots, and full face shield. - Hygienic Work Practices: Product spillages are a significant slip hazard. Ensure any spillages are cleaned up immediately. (Refer Section 6)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES	
Appearance:	Clear liquid.
Odour:	None.
pH:	14
Vapour Pressure:	2.3 kPa (25°C)
Vapour Density:	1
Boiling Point:	110°C
Freezing Point:	<5°C
Solubility in Water:	Soluble
Specific Gravity:	1.47

SECTION 10 STABILITY AND REACTIVITY	
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Avoid heat. Avoid contact with Acids. Avoid contact with ammonium salts, aluminium, tin, zinc or magnesium.
Incompatible Materials:	Acids, ammonium salts, aluminium, tin, zinc, magnesium.
Hazardous Decomp. Products:	None.

Hazardous Reactions:	Reacts vigorously with acids producing significant heat and potential splashing. Reacts with aluminium, zinc and magnesium producing hydrogen gas, which is highly flammable and explosive in confined spaces. Reacts with ammonium salts liberating ammonia gas which is corrosive to skin and mucous membranes.
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SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological Data:	LD50 Oral (Rat) – 350 mg/kg No specific data is available for chronic exposure symptoms. The ingredients are not listed as carcinogenic in 'Workplace Exposure Standards (NZ)', nor in NOHSC's <i>List of Designated Hazardous Substances (Aus)</i> .
Inhalation:	Can cause mild irritation to mucous membranes to severe pneumonitis depending on severity of exposure.
Ingestion:	Can cause severe burns and complete perforation of mucous membranes of the mouth, throat, and stomach. May be fatal if swallowed.
Skin:	Destructive to tissue on contact. May produce severe burns.
Eyes:	Destructive to eye tissue on contact. Will cause severe burns. May cause blindness.


SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:	Sodium Hydroxide: Ceriodaphnia sp.: LC50 (48hr) = 40 mg/l (Warne et al., 1999). Potassium Hydroxide: Mosquito Fish: LC50 (24hr) = 80.0 mg/L.
Persistence and Degradability:	Information not available.
Mobility:	Information not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods:	Dispose of in accordance with all government regulations. Contact a waste disposal company to dispose of unwanted product. Wash empty packaging well with water, rinsing several times. Email or phone to arrange return of containers for recycling.
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SECTION 14 TRANSPORT INFORMATION

Label for Conveyance:	
UN Number:	1719
UN Proper Shipping Name:	CAUSTIC ALKALI LIQUID N.O.S. (Contains Sodium hydroxide and Potassium hydroxide)
Class Number:	8
Class:	Corrosive Substances.
Subsidiary Risk:	None Allocated.
pH Classification	Strong Alkaline
Packing Group:	II
Special Precautions for User:	None
HAZCHEM Code:	2R

SECTION 15 REGULATORY INFORMATION

Licenses Required:	Information not available.
HSNO Classification:	6.1D, 8.1A, 8.2B, 8.3A, 9.1D, 9.3B
HSNO Group Standard:	Water Treatment Chemicals (Corrosive) Group Standard 2020
HSNO Approval Number:	HSR002681
HSNO Requires Tracking:	No
HSNO Requires Chem Handler:	No

SECTION 16 OTHER INFORMATION

Definitions:	LD50 Oral (Rat)	Lethal dose when taken orally causing death in 50% of the population.
	WES TWA	Workplace Exposure Standard, Time Weighted Average.
	WES STEL	Workplace Exposure Standard, Short Term Exposure Limit.
	NOHSC	National Occupational Health and Safety Commission (Australia).
	CAS Number	Chemical Abstracts Service – Unique chemical number.

References:	Prepared in accordance with the Hazardous Substances (Safety Data Sheets) Notice 2017 EPA CONSOLIDATION 30 April 2021
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Disclaimer:	The information contained herein is based on the present state of our knowledge and is given in good faith. This information is intended to describe our product from the point of view of safety requirements; it should not therefore be construed as guaranteeing specific properties. No warranty, expressed or implied is made. Any use of this data and information must be determined by the user to be in accordance with applicable Governmental laws and regulations.

END OF SDS