CREATED DATE: **May 2009**
REVISED DATE: **July 2022**
Valid for 5 years from this date.

SAFETY DATA SHEET
SPA STORE HARDNESS RAISER

1. CHEMICAL PRODUCT/COMPANY NAME

Product Name	Spa Store Hardness Raiser
Other Names	Calcium Chloride
Product Use	Reduces calcium hardness in water.
Company Name	Pool Ranger Pty Ltd 4/1 Prosperity Place Warriewood 2102
Telephone Number	02 9979 3490
Emergency Number	02 9979 3490 (Office hours 9am – 5 pm)

2. HAZARD IDENTIFICATION/CLASSIFICATION

SUSMP Classification	S5
ADG Classification	Class 8: Corrosive Substances.
UN Number	3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

GHS Signal word: WARNING.

HAZARD STATEMENT	H319: Causes serious eye irritation.
PREVENTION	P264: Wash contacted areas thoroughly after handling. P280: Wear protective gloves, protective clothing and eye or face protection. P281: Use personal protective equipment as required.

RESPONSE	P337: If eye irritation persists: seek medical attention. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

STORAGE	P405: Store locked up. P402+P404: Store in a dry place. Store in a closed container. P403+P233: Store in a well-ventilated place. Keep container tightly closed.
DISPOSAL	P501: If product cannot be recycled, consider controlled incineration, or contact a specialist waste disposal company (see Section 13 of this SDS).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	**Formula**	**CAS Number**	**Proportions (%)**
CaC12 Flakes	CaC12	(10043-52-4)	94 - 97%
Iron Compounds (as Fe)	No data available		0.0005%Max %
Other Chemicals (as naC)	No data available		5.50% Max %
Water	No data Avaialble	7732-18-5	0.10% Max %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure.

Ingestion	Rinse mouth with water. Give water to drink. Do **NOT** induce vomiting. If symptoms develop, seek medical attention.
Eye	Immediately flush eyes with plenty of water holding eyelids open. If irritation persists, seek medical attention.
Skin	Remove contaminated clothing. Wash affected area with soap and water. If irritation persists, seek medical attention.
Inhaled	Remove victim from exposure to fresh air. If rapid recovery does not occur, seek medical attention.
Advice to Doctor	Treat symptoms symptomatically based on individual reactions of patient and judgment of doctor. **NOTE: For advice in an emergency, contact: Poisons Information Centre Australia 13-11-26.** **Aggravated Medical Conditions caused by exposure** No information available on medical conditions which are aggravated from exposure to this product.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Product is a non-flammable solid. In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.

Hazards from Combustion Products	Non-combustible solid. Material does not burn. Containers may explode upon heating. Avoid generating dust. Incompatible with oxidizing agents, calcium oxide, boron oxide, methyl vinyl ether, bromine trifluoride and sources of ignition. Reacts exothermically with water to liberate heat. Hygroscopic. Fire or heat may produce irritating, poisonous and/or corrosive gases.
Special protective precautions and equipment for fire fighters	Fire fighters should wear self-contained breathing apparatus (SCBA) and full protective fire fighting clothing along with protective equipment.
Hazchem Code	**N/A**

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	Personnel involved in the clean up should wear full protective clothing. Eliminate all sources of ignition. Increase ventilation. Stop leak if safe to do so. Avoid generating dust. Do not allow product to reach drains, sewers or waterways. If the product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use spark-proof tools and equipment.
Methods and Materials for Containment and Clean Up	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labeled waste container and hold for safe disposal. Minor spills and small residuals can be flushed down the drain with plenty of water.

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.
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 including oxidizing agents, calcium oxide, boron oxide, methyl vinyl ether,

	Bromine trifluoride and ignition sources.
Handling and Storage continued	Protect from moisture. Hygroscopic. This product is no classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container Type	Packaging must comply with requirement of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Standards	No exposure standard has been established for this product by The Australian Safety and Compensation Council (ASCC). However, the exposure standard for the dust not otherwise specified is 10mg/m3 (for inspirable dust) and 3mg/m3 (for respirable dust).
Biological Limit Values	Currently, there are no Biological Exposure Indices (BEIs) determined for the components of this product.
Engineering Controls	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.

Exposure Controls/Personal Protection continued

Personal Protection

RESPIRATOR	Wear an effective dust mask (P2 filter) where dusts are generated (AS1715/1716)
EYES	Safety glasses with side shields (AS1336/1337)
HANDS	Wear elbow length PVC or neoprene gloves (AS2161)
CLOTHING	Chemical resistant overalls and safety footwear (AS3765/2210). DO NOT use leather/boots products as they will dehydrate resulting in shrinkage and possible destruction.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White flakes, granules or powder
Odour	Odourless
Vapour Pressure	Insignificant
Vapour Density	N/A
Melting Point	772
Solubility in Water	745g/L evolves heat
Specific Gravity	Not Applicable
Flash Point	Not Applicable
pH	8-12 (10% H20 solution

Flammability Limited	As percentage volume in air.
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable
Ignition Temperature	Not applicable
Specific Heat Value	Not applicable
Particle Size	Not applicable
Volatile Organic Compounds	Not applicable
Evaporation Rate	Not applicable
Viscosity	Not applicable
Percent Volatile	Not applicable
Octanol/Water Partition Coefficient	Not applicable
Saturated Vapour Concentration	Not applicable
Additional Characteristics	Not applicable
Flame Propagation/Burning Rate of Solid Materials	Not applicable
Properties of Materials that may Initiate or Contribute to Fire Intensity	Not applicable
Potential for Dust Explosion	Not applicable
Fast of Intensely Burning Characteristics	Not applicable
Non-flammables that could contribute Unusual Hazards to a Fire	Not applicable
Release of Invisible Flammable Vapours and Gases	Not applicable
Decomposition Temperature	320-360

Additional Information	Molecular Weight: 111.0 Bulk density: 0.75-1.0g/cm3 Solubility: Soluble in water, alcohol, acetic acid & acetone

10.STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal circumstances of use, storage and temperature.
Conditions to Avoid	Avoid excessive heat, generating dust, static discharges, direct sunlight, moisture and high temperatures.
Conditions to Avoid	Avoid excessive heat, generating dust, static discharges, direct sunlight, moisture and high temperatures.
Incompatible Materials	Incompatible with oxidizing agents, calcium oxide, boron oxide, Methyl vinyl ether, bromine trifluoride and sources of ignition.
Hazardous Decomposition Products	Fire and heat may produce irritating, poisonous and/or corrosive gases. Reacts exothermically with water liberating heat.
Hazardous Reactions	Hazardous polymerization occurs if calcium chloride is mixed with methyl vinyl ether.

11.TOXICOLOGICAL INFORMATION

Toxicity Data	Oral LD50 Rat: 1000mg/Kg Oral LD50 Mouse: 32630mg/Kg
Toxicological Information continued	Acute oral toxicity is determined in accordance with OECD Guideline 401. Skin Irritation Rabbit: Not irritating according to OECD Guideline 404. Eye Irritation Rabbit: Irritating according to OECD Guideline 405. The information on oral acute toxicity and irritation refers to dry product.
Ingestion	Moderately toxic by ingestion.
Skin	Slightly toxic by dermal absorption.
Inhaled	Breathing in dust may result in respiratory tract irritation.

12.ECOLOGICAL INFORMATION

Ecotoxicity	Fathead Minnow LC50 96hr: 4630mg/L Daphnia LC50 48hr: 2770mg/L Nitzschia LC50 120hr: 3130mg/L
Persistence and Degradability	This product will not biograde (inorganic product)
Mobility	Soluble in water and mobile.

Environmental Fate (Exposure)	Avoid contaminating drains, sewers or waterways.
Bioaccumulative Potential	This product does not bioaccumulate in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Disposal	Disposal of in accordance with all local, state and federal regulations.
Special Precautions for Land Fill or Incineration	The waste code classificiation is to be carried out according to the European Waste Catalogue (EWC) specifically for each branch of industry and each type of process.

14. TRANSPOPRT INFORMATION

UN Number	Not applicable
Shipping Name	CALCIUM CHLORIDE
Dangerous Goods Class	8 
Subsidiary Risk	None allotted
Pack Group	0
Precaution for User	Irritant
Hazchem Code	Not applicable

15. REGULATORY INFORMATION

Classified as non-hazardous according to the criteria of the Australian Safety and Compensation Council (ASCC) and Annex I European Directive 67/548/EEC. EC Number: 233-140-8

Poisons Schedule	Not applicable
EPG	Not applicable
AICS Name	Calcium Chloride (CaC12)
HSNO Hazard Classification	6.1D 6.3A 6.4A 9.3C
ERMA Approval Code	186346

16.OTHER INFORMATION

LEGEND TO ABBREVIATIONS AND ACRONYMS

<	Less than
>	Greater than
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Services (Registry number)
cm2	Centimeters squared
CO2	Carbon Dioxide
COD	Carbon Dioxide
Deg C ('C)	Degrees Celsius
g	Gram
g/cm3	Grams per cubic centimeter
g/l	Grams per litre
HSNO	Hazardous Substance & New Organism
IDLH	Immediately dangerous to Life & Health
Immiscible	Liquids are insoluble in each other
Kg	Kilogram
Kg/m3	Kilograms per cubic metre
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 to 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	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 mg/m3	Miscible

Miscible	Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm	Millimeter
mPa.s	Milli Pascal per second
N/A	Not applicable

NOHSC	National Occupational Health & Safety Commission
OECD	Organisation for Economic Co-operation and Development
PEL	Permissible Exposure Limit
ppb	Parts per billion
ppm	Parts per million
ppm/2h	Parts per million per 2 hours
ppm/6h	Parts per million per 6 hours
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limited
TLV	Threshold Limit Value
tne	Tonne
TWA	Time Weighted Average
ug/24H	Micrograms per 24 hours
UN	United Nations (number)
wt	Weight

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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE. IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.