

MATERIAL SAFETY DATA SHEET

Product Name: Calcium Hypochlorite Granules

1. Chemical product and company identification

Product name	Shock Granules
Chemical name	Calcium Hypochlorite Granules, hydrated
Product type and use	Swimming pools
Company identification	Total Pool Chemicals Ltd
Address and telephone number	Unit 1, Pool Bank Park High Street, Tarvin, Chester CH3 8JH
Emergency telephone number	01829 740290

2. Composition/Information on ingredients

Chemical Name	CAS No	Content %	Symbol	R-phrases(s)	EINECS No
Calcium Hypochlorite	7778-54-3		O, C, N	R8 R22 R31 R34 R50	231-908-7

3. Hazards identification

Physical and Chemical	Contact with combustible material may cause fire.
Health	Harmful if swallowed. Contact with acids liberates toxic gas. Causes burns.
Environmental	Very toxic to aquatic organisms

4. First-aid measures

Inhalation	Remove casualty to fresh air and provide warmth and rest. If necessary seek medical advice.
Skin contact	Immediately wash contaminated skin with soap and large quantities of water. If necessary seek medical advice.
Contact with eyes	Immediately wash out eye thoroughly with plenty of water until irritation subsides. If irritation persists, consult an eye specialist/ophthalmologist.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly. Drink plenty of water and if necessary seek medical advice. Beware of aspiration if vomiting does occur.

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5. Fire-fighting measures

General hazard	Contamination with foreign materials may cause fire.
Extinguishing media	Only with copious amounts of water.
Extinguishing media not to be used	Do not use small amounts of water.
Special exposure hazards	The thermal decomposition products released should be considered toxic if inhaled.
Protective equipment	Wear self-contained breathing apparatus and suitable protective equipment.
Further information	Contact with bleaching powder (eg chlorinated isocyanuric acid) may produce harmful explosive gas. Avoid run-off water entering drains (eg use barriers)

6. Accidental release measures

Environmental precautions:	Do not allow the product to enter ground or waste water. If this occurs, inform the local water authority at once.
Methods for cleaning up:	Adhere to personal protective measures. Evacuate area. Take up mechanically (eg sweep or vacuum up) using non sparking tools. Do not return spillage to original drum. Place into a suitable covered container. Label container and dispose of according to local and national law.

7. Handling and Storage

Safe Handling advice:	Handle in accordance with good hygiene and safety practice. Do not breathe dust or fumes. Keep the raising and deposition of dust to a minimum. Keep away from combustible materials.
Storage Requirements for storage areas and containers	Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool (<30°C) and dry. Keep away from incompatible materials and do not knock or jar container.
Further information	Contact with ammonia or other bases may cause an explosion.

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8. Exposure Controls

Personal Protection

Exposure controls Monitoring of the workplace should be considered in accordance with H40 (or equivalent) controls

LTEL (8 hour TWA) ppm 10 mg/m³ (total inhalable dust EH40/2002)

LTEL (8 hour TWA) ppm 4 mg/m³ (respirable dust EH40/2002)

LTEL (8 hour TWA) 0.5 ppm 1.5 mg/m³ (chlorine, EH40/2002)

STEL (15 min) 1 ppm 2.9 mg/m³ (chlorine EH40/2002)

Engineering Controls Ensure adequate ventilation of working area (eg local exhaust ventilation)

Personal protection Observe normal standards for handling chemicals. Avoid breathing dust and eye and skin contact. Wash thoroughly after handling (shower if necessary). Wear personal protective equipment appropriate to the task.

Eye protection Safety goggles (ie EN 166 approved)

Skin protection Natural rubber latex gloves.

Respiratory protection When dusty conditions are encountered, wear a full face respirator with chlorine cartridge and dust prefilter.

Other protection Protective overalls, safety boots.

9. Physical and chemical properties

Form Solid granules

Colour White

Odour Chlorine-like

pH 1% aqueous solution: 12

Boiling point/range n.a.

Melting point/range 180°C

Flash point

Auto flammability

Density 1.1g/cm³

Water solubility 20 g per 100 g water at 20°C (decomposes)

Additional information Specific gravity 2:1

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10. Stability and reactivity	
Stability	Danger of explosion if heated
Thermal decomposition	180°C (DTA)
Conditions to avoid	Heat. Contact with combustible materials. Moisture.
Material to avoid	Organic materials, dioxides, acids, chlorinated isocyanurates, ammonia.
Hazardous reactions	Exothermic reactions may occur with water.
Hazardous decomposition products	Oxygen, chlorine gas.
11. Toxicological information	
Acute toxicity	LD ₅₀ Rat (oral) 790-1260 mg/kg
Dermal compatibility	Corrosive. Causes severe irritation to skin.
Mucous membrane compatibility	Corrosive. High concentrations are destructive to mucous membranes.
Further information	Contact with skin and eyes can cause eczema plus water blisters and conjunctivitis respectively. Not mutagenic in the Ames Test.
12. Ecological Information	
Acute toxicity	LC ₅₀ Atlantic Silverside Fish 0.15 mg/l 96 hours
Degradability	No data available
Further information	The product will slowly dissolve in water and is very toxic to aquatic organisms. Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.
13. Disposal Considerations	
Advice on disposal	In accordance with national and local authority regulations eg special waste (eg Special Waste Regulations, 1996) after consultation.
Contaminated packaging	Treat empty containers in the same way as the product or if possible wash out thoroughly and recycle.

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14. Transport Information

UN No	2880
Proper Shipping Name	Calcium Hypochlorite, hydrated
Packaging Group	II
Road Transport	ADR/RID: Class 5.1, II
Sea Transport	IMDG Code Class 5.1/2880/II
Marine Pollutant	This product should not be marked as a marine pollutant
ICAO/IATA	Class 5.1/2880/II

15. Regulatory Information

EC Labelling		
Symbols	O	Oxidising
	C	Corrosive
	N	Dangerous for the Environment
R-Phrases	R8	Contact with combustible material may cause fire
	R22	Harmful if swallowed
	R31	Contact with acids liberates toxic gas
	R34	Causes burns
	R50	Very toxic to aquatic organisms
S-Phrases	S1/2	Keep locked up and out of reach of children
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S36/37/	Wear suitable protective clothing, gloves and
	S38	eye/face protection.
	S45	In case of accident or if you feel unwell, seek medical advice (show label where possible)
	S61	Avoid release to the Environment.

The statements made herein are based on our best present experience and are intended to describe product safety requirements. They should not therefore be considered as a warranty of specific properties.