MATERIAL SAFETY DATA SHEET
According to 91/155 EEC

1. Identification of the substance/preparation and of the company/undertaking

- **Trade Name:** Granular Shock, Calcium Hypochlorite Granules
- **Other names** Calcium Hypochlorite
- **Intended use of chemical** Pool and spa shock/water sanitiser.
- **Manufacturer/Supplier**

Complete Pool Controls Ltd, Unit 2, The Park, Stoke Orchard, Bishops Cleeve, Gloucestershire, GL52 7RS.

Tel: +44 (0) 8712 229081
Fax: +44 (0) 8712 229083

2. Composition/information on ingredients

- **CAS No. Description** 7778-54-3 Calcium Hypochlorite
- EINECS Number: 231-908-7
- EU Number: 017-012-00-7

3. Hazard Identification


C: Corrosive


O: Oxidising


N: Dangerous for the environment

- **Hazard Information concerning particular hazards for human and the environment**

R 8	Contact with combustible material may cause fire.
R 31	Contact with acids liberates toxic gas.
R 34	Causes burns.
R41	Risk of serious damage to eyes
R 50	Very toxic to aquatic organisms

4. First Aid measures

- **General Advice:** Show this safety data sheet to the doctor in attendance. Remove from exposure, lie down.
- **After inhalation:** Move to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume the most comfortable position and keep warm. Keep at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a facemask. if breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical advice.
- **After skin contact:** Immediately wash with plenty of water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or irritation occurs seek medical advice. For skin burns immediately flood burnt area with plenty of water and cover with a clean dry dressing. Seek immediate medical advice.
- **After eye contact:** Rinse opened eye for at least minutes under running water. Keep eye wide open while rinsing. Remove clothing if contaminated and wash skin. Urgently seek medical attention. Transport to hospital or medical centre.
- **After Ingestion:** Remove from exposure, lie down. Call for a doctor immediately. Do not induce vomiting. If victim is conscious give plenty of water.
- **Note to Physician:** Inhalation of vapours high in concentration may cause shortness of breath (lung oedema). Symptoms may be delayed

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5. Fire fighting measures

• **Special extinguishing media:**	Water spray or for (large quantites necessary)
• **Special exposure hazards in fire:**	Powerful oxidising agent. Decomposes in contact with water evolving toxic chlorine gas.
• **Special protective equipment:**	Wear self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

6. Accidental release Measures

• **Personal Protection**	Wear protective equipment. Keep unprotected persons away.
• **Methods for cleaning:**	Sweep up, avoiding generation of dust , then immediately spread as a thin layer in an uncontaminated, dry open area, to avoid the possibility of hot spots forming. Gradually hose to drain ensuring large dilution. DO NOT store or transport swept up material. DO NOT return spilled material to original container. Do not add dmall amount of water to material. Where a spill has occured in a confined space or an unventilated building and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash. For large spills notify Emergency Services.

7. Handling and storage

• **Storage**	Store in dry cool place, and out of direct sunlight. Store away from combustable materials, foodstuffs, and source of heat. Keep dry, reacts with water; may lead to drum rupture. Keep containers closed at all times - check regularly for spills. Ensure that pallets are clean and free from oil. DO NOT return spilled material to original container.

8. Exposure control/personal protection

• **Exposure control limits and source:**	No exposure limit established
• **Respiratory Protection**	Where dust emissions are possible, respiratory protection must be used.
• **Hand Protection**	Wear suitable chemical resistant gloves
• **Eye Protection**	Wear appropriate safety goggles
• **Skin Protection**	Avoid prolonged contact with skin by wearing appropriate clothing.

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9. Physical and chemical properties

• **Appearance at 20oC**	White Powder
• **Odour**	Chlorinous
• **Specific gravity at 20oC**	2.1 g/cm^3
• **pH (conc)**	11.5
• **Melting Point**	100°C
• **Flammability (solid, gaseous)**	Contact with combustible material may cause fire.
• **Flash Point**	Not applicable.
• **Decomposition temperature**	180°C
• **Solubility in water**	217 g/l

10. Stability and reactivity

• **Stability:**	Oxidising agent. Will react with organic materials. Can readily ignite combustible materials. Decomposition can be rapid and violent upon contacy with incompatable materials and on heating. Decomposes in water evolving chlorine gas. Corrosive to most metals in the presence of moisture.

11. Toxilogical Information

• **Ingestion**	Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach. Large doses may be fatal.
• **Skin**	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
• **Eyes**	A severe eye irritant. Contamination of the eyes can result in permanent injury. Corrosive to eyes; contact can cause corneal burns.
• **Inhalation**	Dusts and chlorine (decomposition product) are corrosive to the respiratory tract Confusion, pulmonary odema and collapse can result. Chlorine, evolved from decomposition when wet, is a severe respiratory irritant, corrosive and highly toxic. Delayed effects can include shortness of breath, headache, pulmonary oedema and pneumonia.
• **Toxicity**	**7778-54-3 calcium hypochlorite** Oral LD50 850 mg/kg (rat)

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12. Ecological Information

- **Mobility** Very toxic for fish
- **Persistence and degradability** Do not allow product to reach ground water, water course or sewage system, even in small quantities.

13. Disposal Considerations

- **Substance** Must not be disposed together with household garbage. Wash to drain with large quantities of water.
- **Container** Disposal must be made according to official regulations

14. Transport Information

- **U N No** UN2880
- **Proper shipping name** Calcium Hypochlorite hydrated
- **Class/division** 5.1 Oxidising Agent

- **Packing group** II
- **Hazard I D No** 50
- **EAC** 2
- **Pollutant** May be considered a marine pollutant

15. Regulatory information

- **Product Name** Calcium Hypochlorite
- **Symbol** Corrosive, Oxidising,
- **Indications of danger**
- **Risk phrases**

R 8	Contact with combustible material may cause fire.
R 22	Harmful if swallowed.
R 31	Contact with acids liberates toxic gas.
R 34	Causes burns.

- **Safety phrases**

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 where possible).
S61	Avoid release to the environment. Refer to special instructions/safety data sheets

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16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.