SAFETY DATA SHEET

Product Name:	**SHOCK GRANULES**		**SDS Reference** 010
Version No. 1	**Revision No.**	**Authorisation date**	January 23rd, 2002

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

Product Name CALCIUM HYPOCHLORITE GRANULES, HYDRATED

Synonym (s) CHLORINE SHOCK GRANULES, GRANULAR SHOCK

Company Identification

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Emergency Telephone **0845 6013142 (24hr)**

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation CALCIUM HYPOCHLORITE (70% MINIMUM AVAILABLE CHLORINE)
CAS number 7778-54-3
EINECS number 231-908-7
EC Index number 017-012-00-7

3. HAZARDS IDENTIFICATION

OXIDISING

Physical & Chemical: CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE (see section 5)

CORROSIVE

Health: HARMFUL IF SWALLOWED.
CONTACT WITH ACIDS LIBERATES TOXIC GAS
CAUSES BURNS.

DANGEROUS FOR THE ENVIRONMENT

Environmental: VERY TOXIC TO AQUATIC ORGANISMS

4. FIRST AID MEASURES

General information	Remove contaminated clothing immediately, to be disposed of or washed before reuse.
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.
Eye contact	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.
Further information	

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 (e.g. chlorinated isocyanuric acid) may produce harmful and explosive gas. Avoid run-off water entering drains (e.g. use barriers).

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up	Adhere to personal protective measures. Evacuate area. Take up mechanically (e.g. 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.
Environmental considerations	Do not allow the product to enter ground or waste water. If this occurs, inform the local water authority at once.
Further information	

7. HANDLING & STORAGE

Advice on safe handling	Handle in accordance with good hygiene and safety practice. Do not breath dust or fumes. Keep the raising and deposition of dust to a minimum. Keep away from combustible materials.
Storage conditions	Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool (< 30ºC) 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls

Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) controls

LTEL (8 hour TWA):		ppm	10	mg/m^3	(total inhalable dust,EH40/2002)
LTEL (8 hour TWA):		ppm	4	mg/m^3	(respirable dust, EH40/2002)
LTEL (8 hour TWA):	0.5	ppm	1.5	mg/m^3	(chlorine, EH40/2002)
STEL (15 min):	1	ppm	2.9	mg/m^3	(chlorine, EH40/2002)

Engineering controls

Ensure adequate ventilation of working area (e.g. 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 (see below)

Eye protection

Safety goggles (i.e. EN 166 approved)

Skin protection

Natural rubber latex gloves (also consider your own risk assessment; e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken)

Respiratory protection

When dusty conditions are encountered, wear a NIOSH/OSHA full face respirator with chlorine cartridge and dust prefilter.

Other protection

Protective overall, safety boots

9. PHYSICAL & CHEMICAL PROPERTIES

Physical form	Solid granules
Colour	White
Odour	Chlorine-like
pH	1% Aqueous solution: 12 [Check – it was 9.4 on original SDS]
Boiling pt / range	N/A °C
Melting pt / range	180 °C
Flash point	°C
Auto flammability	°C
Density	1.1 g/cm^3
Water solubility	20gm per 100gm water at 20° C (decomposes)
Additional information	Specific gravity: 2.1

10. STABILITY & REACTIVITY

Stability	Danger of explosion if heated.
Thermal decomposition	180ºC (DTA)
Conditions to avoid	Heat. Contact with combustible materials. Moisture
Material to avoid	Organic materials, dioxides, acids, chlorinated isocyanurate, 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, e.g. special waste (e.g. Special Waste Regulations, 1996) after consultation with the operator.
Contaminated packaging	Treat empty containers in the same way as the product or if possible wash out thoroughly and recycle.

14. TRANSPORT INFORMATION

United Nations number	UN 2880
Packaging group	II
IMDG code	5.1/2880/II
RID / ADR	5.1, II
ICAO / IATA	5.1/2880/II
Marine pollutant	The product should not be marked as a marine pollutant
Proper shipping name	CALCIUM HYPOCHLORITE, HYDRATED
Emergency action code	2W
Further information	

15. REGULATORY INFORMATION

Classification & labelling The product is classified in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations [CHIP 2002] EC Label: 231-908-7

OXIDISING

CORROSIVE

DANGEROUS FOR THE ENVIRONMENT

Risk 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
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 LABEL WHERE POSSIBLE).
	S61	AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEET.

16. OTHER INFORMATION

Further information

Sources of data The Approved Supply List, the Approved Carriage List, EH40/2002 and other suppliers' safety data sheets

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This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of PLASTICA'S limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.

Data sheet prepared by Rising HS&E Services.