

Printing date 27.01.2025

Version number 7 (replaces version 6)

Revision: 27.01.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

- · Trade name: Granular Shock
- · CAS Number:
- 7778-54-3
- · EC number:
- 231-908-7
- · Index number:
- 017-012-00-7

\cdot 1.2 Relevant identified uses of the substance or mixture and uses advised against

- · Product category
- PC8 Biocidal products
- PC37 Water treatment chemicals
- \cdot Application of the substance / the mixture Water disinfectant
- · Uses advised against

Processes involving the use of incompatible substances - refer to section 10.

Processes involving extreme heat use advised against.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable respiratory protective equipment (RPE).

- · 1.3 Details of the supplier of the safety data sheet
- · Supplier:

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

Tel: +44 (0)1242 662700 (office hours) email: sales@cpc-chemicals.co.uk

• Further information obtainable from: Product safety department.

· 1.4 Emergency telephone number:

OHES Environmental

Tel: 01242 300271 Members of the public seeking specific information on poisons should contact: In England and Wales: NHS 111 - dial 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to GB-CLP

Ox. Sol. 2 H272 May intensify fire; oxidiser.

Acute Tox. 4 H302 Harmful if swallowed.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



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Aquatic Acute 1 H400 Very toxic to aquatic life. · 2.2 Label elements · Labelling according to GB-CLP The substance is classified and labelled according to the GB CLP regulation. · Hazard pictograms GHS03 GHS05 GHS07 GHS09 · Signal word Danger · Hazard statements H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life. · Precautionary statements P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. · Additional information: EUH031 Contact with acids liberates toxic gas. EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine). · 2.3 Other hazards · Results of PBT and vPvB assessment • **PBT:** Not applicable. • **vPvB**: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Substances

- · CAS No. Description
- CAS: 7778-54-3 Calcium hypochlorite
- · Identification number(s)
- · EC number: 231-908-7
- · Index number: 017-012-00-7
- · Additional information: Biocidal active substance

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SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Rinse contaminated clothes (fire hazard) with plenty of water.

· After inhalation:

- In case of inhalation:
- Provide fresh air.
- In case of breathing difficulties administer oxygen.
- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.
- Do not leave patient unattended.
- In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

Chemical burns must be treated promptly by a physician.

- · After eye contact:
- Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

- · After swallowing:
- Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

· Information for doctor:

Treat symptomatically and supportively.

Refer to section 11.

- 4.2 Most important symptoms and effects, both acute and delayed Corrosive damage to gastro-intestinal tract.
- Hazards Danger of pulmonary oedema.
- · 4.3 Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents:
- Water

Carbon dioxide

Use fire extinguishing methods suitable to surrounding conditions.

- · For safety reasons unsuitable extinguishing agents:
- Water with full jet

Do not use ABC extinguishers containing nitrogen, due to risk of violent chemical reaction.

• 5.2 Special hazards arising from the substance or mixture

Strong oxidiser. Contact with combustible or flammable substances may cause fire.

In case of fire, the following can be released:

Chlorine gas

Hydrogen chloride (HCl)

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· 5.3 Advice for firefighters

· Protective equipment:

Wear self-contained respiratory protective device. Do not inhale explosion gases or combustion gases. Wear fully protective suit. • Additional information

Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Avoid formation of dust.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
6.2 Environmental precautions: Do not allow to penetrate the ground/soil.
Do not allow product to reach sewage system or any water course in the undiluted form. Inform respective authorities in case of seepage into water course or sewage system.
6.3 Methods and material for containment and cleaning up: Pick up mechanically.
Do not use combustible materials such as paper towels to clean up spills.
Send for recovery or disposal in suitable receptacles. Ensure adequate ventilation.

- · 6.4 Reference to other sections
- See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Avoid contact with clothing and other combustible materials.

Do not mix with acids.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Safety showers and eye wash facilities should be available at the work area.

Rinse contaminated clothing with plenty of water (Fire hazard)

· Information about fire - and explosion protection: Potentially explosive when mixed with organic substances.

· 7.2 Conditions for safe storage, including any incompatibilities

- · Storage:
- Requirements to be met by storerooms and receptacles:

Prevent any seepage into the ground.

· Information about storage in one common storage facility:

Store away from flammable substances.

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Do not store on combustible materials such as wooden floors or wooden pallets.



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Store away from foodstuffs. Store away from reducing agents. Store away from metals.

Do not store together with textiles.

Do not store together with acids.

• Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Protect from humidity and water.

• Storage class: 5.1 B

• 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Ingredients with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

• Appropriate engineering controls No further data; see section 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Do not eat, drink, smoke or sniff while working.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Do not breathe dust

Depending on the degree of exposure, periodic medical examination is suggested.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Ensure that eyewash stations and safety showers are close to the workstation location.

Contaminated clothes are a fire hazard. Rinse with plenty of water.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· Hand protection



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

Natural rubber, NR Nitrile rubber, NBR

^{· 8.1} Control parameters



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Butyl rubber, BR

Fluorocarbon rubber (Viton)

PVC gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. • Not suitable are gloves made of the following materials:
- Leather gloves Textile gloves.
- · Eye/face protection



Tightly sealed goggles conforming to EN166.

· Body protection:



Impervious protective clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

· Environmental exposure controls Do not allow to enter drains, sewers or watercourses.

· Risk management measures The operators shall be instructed adequately.

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties		
· General Information	incar properties	
· Physical state	Solid	
· Colour:	White	
· Odour:	Like chlorine	
· Odour threshold:	Not determined.	
· Melting point/freezing point:	180 °C	
· Boiling point or initial boiling point and b	oiling range Undetermined.	
· Flammability	Product is not flammable.	
· Lower and upper explosion limit		
· Lower:	Not determined.	
· Upper:	Not determined.	
· Flash point:	Not applicable.	
· Decomposition temperature:	Not determined.	
· pH	11.5 (1%)	
· Viscosity:		
· Kinematic viscosity	Not applicable.	
· Dynamic:	Not applicable.	
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· Solubility	
· water at 20 °C:	217 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	2.35 g/cm ³
· Relative density	Not determined.
Vapour density	Not applicable.
• 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.
· Appearance:	
· Form:	Powder
· Important information on protection of health an	nd
environment, and on safety.	
· Ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	142.99 g/mol
• Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
 Self-reactive substances and mixtures 	Void
 Pyrophoric liquids 	Void
· Pyrophoric solids	Void
 Self-heating substances and mixtures 	Void
· Substances and mixtures, which emit flammable gas	es
in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	May intensify fire; oxidiser.
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

• 10.1 Reactivity No further relevant information available.

- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
 10.3 Possibility of hazardous reactions
- Reacts with acids releasing chlorine.

Reacts with alkali, amines and strong acids.



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Acts as an oxidising agent on organic materials such as wood, paper and fats. Reacts violently with many substances. May produce violent reactions with bases and numerous organic substances including alcohols and amines. Decomposes slowly on contact with water. • 10.4 Conditions to avoid No further relevant information available. · 10.5 Incompatible materials: Reducing agents. Strong acids. Organic solvents. Combustible materials. Substances specifically listed in section 10.3 as incompatible. Amines Ammonia Nitrates Ammonium salts. **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl) Chlorine Oxygen

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Harmful if swallowed.
- · Primary irritant effect:
- · Skin corrosion/irritation
- Causes severe skin burns and eye damage.
- · Serious eye damage/irritation Causes severe skin burns and eye damage.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Additional toxicological information:

EFFECTS OF SHORT-TERM EXPOSURE: Lachrymation. The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion.

Inhalation of decomposition products may cause lung oedema. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Attention by a doctor should be considered.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

- · 11.2 Information on other hazards
- Endocrine disrupting properties Substance is not listed.

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SECTION 12: Ecological information

- · 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability Inorganic substance: not applicable
- 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- · 12.7 Other adverse effects
- · Remark: Very toxic for fish
- · Additional ecological information:
- · General notes:

Very toxic for aquatic organisms

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

- Recommended Hierarchy of Controls:
- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation. Do not mix with other waste streams.

· Uncleaned packaging:

· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Container remains hazardous when empty. Continue to observe all precautions.

Disposal must be made according to official regulations.

Do not mix with other waste streams.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

• Recommended cleansing agents: Water, if necessary together with cleansing agents.

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SECTION 14: Transport information	
 · 14.1 UN number or ID number · ADR/RID/ADN, IMDG, IATA 	UN3487
 · 14.2 UN proper shipping name · ADR/RID/ADN · IMDG 	UN3487 CALCIUM HYPOCHLORITE, HYDRATEI CORROSIVE, ENVIRONMENTALLY HAZARDOUS CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVI
·IATA	MARINE POLLUTANT CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN	
· Class · Label	5.1 (OC2) Oxidising substances. 5.1+8
	5.170
· Class · Label	5.1 Oxidising substances. 5.1/8
· IATA	5.1 Oxidising substances.5.1 (8)
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	Π
 14.5 Environmental hazards: Marine pollutant: Special marking (ADR/RID/ADN): 	Environmentally hazardous substance, solid; Marine Pollutant Symbol (fish and tree) Symbol (fish and tree)
 • 14.6 Special precautions for user • Hazard identification number (Kemler code): 	Warning: Oxidising substances. 58
 Hazchem Code: EMS Number: Segregation groups Stowage Category Stowage Code 	1W F-H,S-Q (SGG8) Hypochlorites D SW1 Protected from sources of heat. SW11 Cargo transport units shall be shaded from direct



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	sunlight. Packages in cargo transport units shall be stowed so
	as to allow for adequate air circulation throughout the cargo.
· Segregation Code	SG35 Stow "separated from" SGG1-acids
	SG38 Stow "separated from" SGG2-ammonium compounds.
	SG49 Stow "separated from" SGG6-cyanides
	SG53 Shall not be stowed together with combustible material
	in the same cargo transport unit
	SG60 Stow "separated from" SGG16-peroxides
14.7 Maritime transport in bulk according	to IMO
instruments	Not applicable.
Transport/Additional information:	Do not transport with food and feedstuffs.
· ADR/RID/ADN	
· Limited quantities (LQ)	1 kg
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
· Transport category	2
Tunnel restriction code	E
IMDG	
· Limited quantities (LQ)	1 kg
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
UN "Model Regulation":	UN 3487 CALCIUM HYPOCHLORITE, HYDRATED CORROSIVE, 5.1 (8), II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Poisons Act

· Regulated explosives precursors Substance is not listed.

• Regulated poisons Substance is not listed.

• Reportable explosives precursors Substance is not listed.

• **Reportable poisons** Substance is not listed.

· Control Of Major Accident Hazards Regulations 2015 (COMAH)

• Named dangerous substances - ANNEX I Substance is not listed.

· COMAH category

P8

E1

 \cdot Qualifying quantity (tonnes) for the application of lower-tier requirements $50\,t$

· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION 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. This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

· Department issuing SDS: Product safety department.

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
* Data compared to the previous version altered.