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## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier:

**Identification as on the label/Trade name:** Frexus® Granular

**Additional information:** Product code SCI25FG

### Relevant identification uses of the substance and uses advised against:

**Identified uses:** Approved disinfectant for food and beverage industry.

**Uses advised against:** None.

### Details of the supplier of the Safety Data Sheet:

Arch Water Products South Africa (Pty) Ltd.

(Reg. No. 1972/014058/07)

P O Box 150, Kempton Park, 1620

Situated At: NCP Chlookop Factory Site

Hytor Street

Chlookop

Kempton Park, 1619

### Emergency telephone numbers:

Poisons Information Centre: 0861 555 777 (24 hours)

+27 11 976 2115 (Office hours only)

## SECTION 2. HAZARDS IDENTIFICATION

### Classification of the substances or mixture:

The mixture is classified according to:

**SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]**

#### Hazard classes/Hazard categories

Oxidising Solid (Category 2)

Acute Toxicity Oral (Category 4)

Skin Corrosion (Category 1B)

Serious Eye Damage (Category 1)

Specific Organ Toxicity single exposure (Category 3)

Aquatic Acute 1

#### Hazard statement

H272

H302

H314

H318

H335

H400

For full text of H-Statements see section 2.2

**The most important adverse effects:**

**The most important adverse physiochemical effects:** Oxidising solid.

**The most important adverse human health effects:** Causes severe skin burns and eye damage.

**Label elements:**

**Hazard pictograms:**



**Signal Words: DANGER**

**Hazard Statements:** H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

**Precautionary Statements:** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep/Store away from clothing/ combustible materials. P260 Do not breathe dust or fumes. P280 Wear eye protection. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P370+P378 In case of fire: Use dry sodium carbonate for extinction. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363 Wash contaminated clothing before reuse. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/ physician. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional regulations.

**Special labelling of certain mixtures:** Contact with acids liberates toxic gas.

**Other hazards:** None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture

**Ingredients:**

Substance name (IUPAC)	CAS-No.	Concentration % by weight	Classification EC1272/2008
	EC-No.		
Calcium oxychloride	7778-54-3	60-70	Oxidizing Solid (Category 2) H272. Acute Toxicity (Category 4) H302. Skin Corrosive (Category 1B) H314. Aquatic Acute (Category 1) H400.
	231-908-7		
Hydrated lime	1305-62-0	1-5	Skin irritation (Category 2) H315. Eye damage (Category 1) H318. STOT SE (Category 3) H335.
	215-137-3		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available listed in Section 8.

For the full text of the H-Statements mentioned in this Section, see Section 16

### SECTION 4. FIRST AID MEASURES

**Description of first aid measures:**

**In case of inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of discomfort seek medical attention.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. Seek medical advice if symptoms persist.

**In case of ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention.

**Most important symptoms and effects, both acute and delayed:**

**Inhalation:** Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, and shortness of breath, headache, nausea and vomiting. Inhalation may be fatal as a result of spasm inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

**Ingestion:** Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhoea.

**Skin Contact:** Corrosive. Symptoms of redness, pain, and severe burns can occur

**Eye Contact:** Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

**Indication of any immediate medical attention and special treatment needed:**

None known.

## **SECTION 5. FIREFIGHTING MEASURES**

### **Extinguisher media:**

**Suitable extinguisher media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide Prevent contamination of drains or waterways.

**Unsuitable extinguishing media:** None known.

### **Special hazards arising from the mixture:**

Sealed containers may rupture when heated. An explosion can occur if either a carbon tetrachloride or a dry ammonium compound fire extinguisher is used to extinguish a fire involving calcium hypochlorite.

### **Advice for fire-fighters:**

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Avoid inhalation, and contact with skin. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**For emergency responders:** Remove all sources of ignition. Keep water away from spilled material.

### **Environmental precautions:**

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

### **Methods for containment and cleaning up:**

**For small spills:** Contain spilled material if possible. Sweep and shovel, collect with an electrically protected vacuum cleaner or by wet-brushing and place in container according to local regulations. Do not flush with water. Collect in suitable and properly labelled containers.

**For large spills:** Dike area to contain spill. Sweep and shovel, collect with an electrically protected vacuum cleaner or by wet-brushing and place in container according to local regulations. Do not flush with water. Collect in suitable and properly labelled containers.

### **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 information on disposal.

**Additional information:**

None know.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for safe handling:**

**Protective measures:** Observe directions on label and instructions for use. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Advice on general occupational hygiene:** Do not smoke. Do not eat drink or smoke when handling this product.

### **Conditions for safe storage, including incompatibilities:**

Store in a cool place. Keep container tightly closed in a dry and well ventilated place. Never allow product to get into contact with water during storage. Do not store near other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

### **Specific end uses:**

Use only as directed.

**Shelf Life Limitations:** Do not store product where the average daily temperature exceeds 35°C / 95°F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in cool, dry and well-ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters:**

**Occupational exposure limits:** No data available.

**Biological exposure indices (BEI):** No data available.

**Additional exposure limits under the conditions of use:** No data available.

### **Exposure control:**

**Appropriate engineering controls:** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Hand protection:** Use chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber, Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, polyvinyl alcohol, Polyvinyl chloride

**Body protection:** Not necessary under normal use.

**Respiratory protection:** At high dust levels, if discomfort is experienced, use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines

**Environmental exposure controls:** None required.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

**Appearance (form):** Granules.

**Colour:** White or grey-white.

**Odour:** Chlorine odour.

**Odour threshold:** Not known.

**pH (1% solution) :** Not known.

**Melting point/range (°C):** Decomposes above 177°C (350°F), releasing oxygen.

**Boiling point/range (°C):** Not known.

**Flash point (°C):** Not known.

**Evaporation rate:** Not known.

**Flammability (solid, gas):** Not know.

**Ignition temperature (°C):** Not known.

**Upper/lower flammability/explosive limits:** Not known.

**Vapour pressure (20°C):** Not known.

**Vapour density:** 6.9

**Relative density (25°C):** Not known.

**Water solubility (g/l) at 20°C:** 10 g/l

**n-Octanol/ Water partition coefficient:** Not known.

**Auto-ignition temperature:** Not known.

**Decomposition temperature:** 170 – 180 °C

**Viscosity, dynamic (mPa s):** Not known.

**Physical hazards:**

Oxidiser.

**Other information:**

**Volatiles by volume @ 21°C (70°F):** 0 %

**Fat solubility (solvent-oil to be specified):** Not known.

**Bulk density:** Not known.

**Dissociation constant in water (p Ka):** Not known.

**Oxidation-reduction potential:** Not known.

**SECTION 10. STABILITY AND REACTIVITY**

**Reactivity:**

Product is not sensitive to mechanical shock or impact.

**Chemical stability:**

Stable under recommended conditions of storage. Product will not undergo hazardous polymerization

**Possibility of hazardous reactions:**

Hazardous polymerization is not expected to occur.

**Conditions to avoid:**

Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 35°C / 95°F. Prevent ingress of humidity and moisture into container or package. Always close the lid.

**Incompatible materials:**

If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gasses and spatter.

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**Hazardous decomposition products:**

Chlorine.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Toxicokinetics, metabolism and distribution:**

**Non-human toxicological data:** No data available.

**Method:** No data available.

**Dosage:** No data available.

**Routes of administration:** No data available.

**Results:** No data available.

**Absorption:** No data available.

**Distribution:** No data available.

**Metabolism:** No data available.

**Excretion:** No data available.

**Information on toxicological effects:**

**Acute toxicity: Calcium hypochlorite:** LD<sub>50</sub> Oral for rat 850 mg/kg.

**Skin corrosion/irritation:** No data available.

**Serious eye damage/irritation:** No data available.

**Respiratory or skin sensitization:** No data available.

**Germ cell mutagenicity:** No data available.

**Carcinogenicity: Calcium hypochlorite:** IARC category 3.

**Reproductive toxicity:** No data available.

**STOT-single exposure:** No data available.

**STOT-repeated exposure:** No data available.

**Aspiration hazard:** No data available.



**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity:**

No data available

**Persistence and degradability:**

No data available.

**Bioaccumulative potential:**

No data available.

**Mobility in soil**

No data available.

**Results of PBT& vPvB assessment:**

No data available.

**Other adverse effects:**

No data available.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods:**

Dispose of in accordance with municipal, provincial and national regulations.

**Product/ packaging disposal:**

Recycle where possible.

**SECTION 14. TRANSPORT INFORMATION**

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
<b>UN-Number</b>	1748	1748	1748
<b>UN Proper shipping name:</b>	CALCIUM HYPOCHLORITE, DRY	CALCIUM HYPOCHLORITE, DRY	CALCIUM HYPOCHLORITE, DRY
<b>Transport hazard class:</b>	5.1	5.1	5.1
<b>Packaging group:</b>	II	II	II
<b>Marine pollutant:</b>	Yes	Yes	Yes
<b>Special precautions for user:</b>			
<b>Transport in bulk according to MARPOL 73/78 Annex II and the IBC code</b>			

## **SECTION 15. REGULATORY INFORMATION**

### **Safety, health and environmental regulations/legislation for the mixture:**

**Relevant information regarding authorization:** Occupational Health and Safety Act 1993  
Regulation for Hazardous Chemical Substances.

**Relevant information regarding restrictions:** None known.

**EU regulations:** Regulation EC 1272/2008 [EU-GHS/CLP]

**Other National regulations:** None.

**Chemical Safety Assessment carried out?** No.

## **SECTION 16. OTHER INFORMATION**

### **Indication of changes:**

GHS aligned.

### **Relevant classification and H statements (number and full text):**

Aquatic Acute 1: Hazardous to the Aquatic Environment Acute 1

H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes serious skin and eye damage. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

### **Training instructions:**

Use as instructed.

### **Further information:**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

### **Notice to readers:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.