

**Safety data sheet**  
according to 1907/2006/EC, Article 31



**Protea  
Chemicals**

A member of the Omnia Group  
"more than just a chemical supplier"

Printing date 16.09.2015

Version number 2

Revision: 16.09.2015

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** CALCIUM HYPOCHLORITE
- **Article number:** PP0016
- **CAS Number:** 7778-54-3
- **EC number:**  
231-908-7
- **Index number:**  
017-012-00-7
- **Relevant identified uses of the substance or mixture and uses advised against Industrial use**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Protea Chemicals Wadeville  
1 Berrange Road  
Wadeville, Germiston  
Tel: 011-821 3300
  
- Protea Chemicals PE  
127 Grahamstown Road  
Deal Party, Port Elizabeth  
Tel: 041-403 1000
  
- Protea Chemicals CT  
54 Killarney Avenue  
Killarney Gardens, Milnerton, Cape Town  
Tel: 021-550 8100
  
- Protea Chemicals KZN  
150 Quality Street,  
Jacobs, Durban  
Tel: 031-468 5424
- **Further information obtainable from:** Protea Chemicals
- **Emergency telephone number:**  
08610 OMNIA or  
08610 66642

## 2 Hazards identification

- **Classification of the substance or mixture**



flame over circle

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



corrosion

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



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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Acute Tox. 4    H302 Harmful if swallowed.

· **Label elements**

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS03    GHS05    GHS07    GHS09

· **Signal word** *Danger*

· **Hazard statements**

*May intensify fire; oxidiser.*

*Harmful if swallowed.*

*Causes severe skin burns and eye damage.*

*Very toxic to aquatic life.*

· **Precautionary statements**

*Take any precaution to avoid mixing with combustibles.*

*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*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/doctor.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterisation: Substances**

· **CAS No. Description**

CALCIUM HYPOCHLORITE

· **Identification number(s)**

· **EC number:** 231-908-7

· **Index number:** 017-012-00-7

### 4 First aid measures

· **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.*

· **After inhalation:**

*Remove to fresh air. In case of unconsciousness place patient stably in side position for transportation.*

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- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Flush affected areas with plenty of water and soap.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Call for a doctor immediately. Do not induce vomiting. Rinse mouth with water (only if person is conscious). Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water. Should not be released into the environment.
- **Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.

### 7 Handling and storage

- **Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:**  
Put on appropriate personal protective equipment. Keep away from open flames, shut of the production of sources of ignition. Electricity: static electricity, electricity sparks, heat. Do not breathe vapor or mist. No smoking.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe the rules usually applicable when handling chemicals.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:** Keep container tightly sealed in a dry well-ventilated place.
- **Specific end use(s)** No further relevant information available.

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## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**  
Ensure eyewash stations and safety showers are close to the workstation location.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
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.
- **Respiratory protection:**  
In case of dust formation, wear micro dust mask. Use respiratory equipment with suitable filter or wear a self contained respiratory apparatus.
- **Protection of hands:**  
Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.



Protective gloves

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**  
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.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	White
<b>Odour:</b>	Like chlorine
<b>Odour threshold:</b>	Not determined.
- **pH-value (10 g/l) at 25 °C:** 11,5
- **Change in condition**

<b>Melting point/Melting range:</b>	100 °C (Zers.)
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<b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Contact with combustible material may cause fire.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Self-igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Not determined.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	2,35 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water at 20 °C:</b>	217 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**  
All hypochlorite solutions are unstable and slowly decompose on contact with air. Corrosive to most metals.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Contact with acids releases toxic gases.
- **Conditions to avoid** Ignition sources, dust, excess heat, moisture and humidity.
- **Incompatible materials:**  
Reducing agents, ammonia, phenols, organic and organic matter, alcohols and metal oxides.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

 · **LD/LC50 values relevant for classification:**

Oral	LD50	850 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitisation:** No sensitising effects known.

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- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms  
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                  |  |
|----------------------------------|--|
| · <b>UN-Number</b>               |  |
| · <b>ADR, IMDG, IATA</b>         | UN1748   |
| · <b>UN proper shipping name</b> |  |
| · <b>ADR</b>                     | 1748 CALCIUM HYPOCHLORITE, DRY,<br>ENVIRONMENTALLY HAZARDOUS |
| · <b>IMDG, IATA</b>              | CALCIUM HYPOCHLORITE, DRY                                    |

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· **Transport hazard class(es)**

· **ADR**



· **Class**

5.1 Oxidising substances.

· **Label**

5.1

· **IMDG, IATA**



· **Class**

5.1 Oxidising substances.

· **Label**

5.1

· **Subsidiary risk**

-

· **Packing group**

· **ADR, IMDG, IATA**

II

· **Environmental hazards:**

Environmentally hazardous substance, solid

· **Marine pollutant:**

No

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Oxidising substances.

· **Danger code (Kemler):**

50

· **EMS Number:**

F-H,S-Q

· **Segregation groups**

Hypochlorites

· **ERG No.**

140

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **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":**

UN1748, CALCIUM HYPOCHLORITE, DRY, ENVIRONMENTALLY HAZARDOUS, 5.1, II

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### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**  
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS03   GHS05   GHS07   GHS09

- **Signal word** *Danger*
- **Hazard statements**  
*May intensify fire; oxidiser.*  
*Harmful if swallowed.*  
*Causes severe skin burns and eye damage.*  
*Very toxic to aquatic life.*
- **Precautionary statements**  
*Take any precaution to avoid mixing with combustibles.*  
*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
*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/doctor.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

### 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.*

- **Abbreviations and acronyms:**  
*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*  
*ICAO: International Civil Aviation Organisation*  
*ADR: Accord européen sur le transport 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*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*Ox. Sol. 2: Oxidising Solids, Hazard Category 2*  
*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B*  
*Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1*

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