MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION.

Trade Name:	**Calcium Hypochlorite**
Synonym:	Calcium Oxychloride
Manufacturer/Supplier:	Central Chemical Supplies Limited 44 Hall Road Donaghcloney, Craigavon, Co. Armagh, BT66 7LJ. Northern Ireland.
Telephone Number:	+44 (0) 28 38 881 936.
Fax Number:	+44 (0) 28 38 882 335.
Emergency Telephone Number:	+44 (0) 28 38 881 936. (office hours) +44 (0) 787272501842. (out of office hours)
Email:	info@ccsni.co.uk

2. HAZARD IDENTIFICATION.

Hazard symbol(s):

O – Oxidising.
C – Corrosive
N – Dangerous for the environment.
Decomposes at 100^{o}C giving off oxygen (increased fire hazard) and Toxic chlorine gas. Reacts with water forming chlorine gas. Store away from strong reducing agents and strong acids.

Harmful if swallowed, inhaled, or absorbed through the skin. Pulmonary oedema (del). Causes severe irritation. High concentrations are extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes and skin.
Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

If swallowed Calcium Hypochlorite can produce nausea, vomiting, delirium, coma, respiratory collapse, holes in the oesophogus and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS.

White or off white crystalline/granular powder.

CAS no:	7778-54-3
Index no:	017-012-00-7

UN no:	1748
EC no:	231-908-7

4. FIRST AID MEASURES.

CORROSIVE SUBSTANCE

First aid -Inhalation:	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. If recovery is not immediate or complete call for immediate medical attention.
First aid – Eyes:	Immediately flush with copious amounts of water for at least 15 minutes keeping eyelids open. Seek immediate medical attention.
First aid – Skin:	Wash with copious amounts of water for at least 15 minutes whilst removing contaminated clothing and shoes. If symptoms persist seek medical attention.
First aid – Ingestion:	Wash out mouth with water. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

In fire Calcium Hypochlorite gives off oxygen intensifying fire hazard also produces toxic gases.

Personal precautions:	Exercise caution when fighting any chemical fire. Evacuate unnecessary personnel. Move up wind. Move containers from fire area if possible without personal risk. (Depending on the severity of the fire, and the quantity of Calcium Hypochlorite involved, it might be necessary to evacuate people from the surrounding area).
Personal equipment:	Self-contained breathing apparatus. Safety goggles or full face shield. Gloves. Protective suit and boots.
Extinguishing media:	Water spray.
Unusual fire and explosion hazards:	Decomposes at 100^{o}C giving of oxygen (increased fire hazard).

6. ACCIDENTAL RELEASE MEASURES

Exposure controls:	**Only personnel equipped with suitable protective equipment may deal with spillage or loss of containment of this product.** Evacuate area. Keep up-wind of the spill. Eliminate all sources of ignition.

	Stop all drains in the immediate vicinity.
Personal protection:	Self contained breathing apparatus. Rubber boots. Heavy rubber gloves. Protective suit.
Environment:	Do not allow product to enter drains or water courses. If spillage of contaminated washings causes contamination of water courses, drains or vegetation, inform relevant authorities.
Clean-up measures:	Cover with dry lime, sand or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.
Disposal consideration:	Place in covered containers using non-sparking tools and transport outdoors. See section 13 for disposal.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice. Local exhaust and general ventilation must be adequate to meet exposure standards. Keep containers tightly closed. Keep away from combustible material. Keep away from heat, sparks and open flame. NO SMOKING. Wear appropriate NIOSH/MSHA – approved respirator. Chemical resistant gloves. Safety goggles. Protective clothing. Do not eat or drink in the workplace. Wash thoroughly after handling and before eating food. Emergency eyewash bottle/fountain/safety showers should be available in the immediate vicinity of any potential exposure.
Storage:	Store under cool, dry, well ventilated conditions – NON-SMOKING AREA. Do not store near reducing agents and strong acids. Keep away from combustible materials, heat, sparks and open flame. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures:	Local exhaust and general ventilation must be adequate to meet exposure standards. In case of insufficient ventilation wear appropriate respiratory device.

Personal protection

Respiratory:	Dust mask or self contained breathing apparatus.
Skin:	PVC or other chemical resistant gloves. Protective overalls.
Eyes:	Safety goggles giving complete eye protection. Emergency eyewash bottle.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White/off white crystalline or granular powder.
Odour:	Pungent.
Melting point:	100°C
P.W.:	142.99

10. STABILITY AND REACTIVITY

Stability:	Stable if all precautions are adhered to.
Conditions to avoid:	Sources of ignition – Heat, sparks and open flame.
Materials to avoid:	Strong reducing agents and strong acids.
Hazardous decomposition products:	Thermal decomposition of Calcium Hypochlorite sets in around 175° with the evolution of oxygen and chlorine. Use of carbon tetrachloride extinguisher on a fire in an open container of hypochlorite produced an explosion. Ammonia, primary aliphatic or aromatic amines react with hypochloite to produce explosively unstable compounds. Calcium Hypochlorite containing over 60% active chlorine ignites on contact with lubricating oils, damp sulphur, organic thiols of sulfides. Metal oxides catalize the oxygen evolving decomposition of the Hypochlorite. Contact of the solid Hypochlorite with nitromethane alcohols, glycerol phenol or diethlene glycol monomethyl ether result in ignition. Heating a confined mixture of the Hypochlorite and carbon results in an explosion.

11. TOXICOLOGICAL INFORMATION

Inhalation:	Sore throat. Cough. Shortness of breath. Possible

	systemic effects. Severe irritation RESP. Pulmonary oedema (del). High concentrations are extremely destructive to tissues of the mucous membranes and upper respiratory tract.
Skin:	Burning. Redness. High concentrations can be extremely destructive to skin tissues.
Eyes:	Pain. Redness, watering. Blurred vision. High concentrations can be extremely destructive to eye tissue.
Ingestion:	Sore throat. Abdominal pain, nausea, vomiting, delirium, coma, respiratory collapse, holes in the oesophogus and stomach.

12. ECOLOGICAL INFORMATION

Environmental:	Very toxic to aquatic organisms.

13. DISPOSAL

Treatment:	Cautiously acidify a 3% solution or a suspension of the material to pH2 with Sulphuric Acid. Gradually add a 50% excess of aqueous sodium bisulphite with stirring at room temperature. An increase in temperature indicates that a reaction is taking place. If no reaction is observed on the addition of about 10% of the sodium bisulphite solution, initiate it by cautiously adding more acid. If manganese, chromium, or molybdenumare present, adjust the pH of the solution to 7 and treat with sulphide to precipitate for burial as hazardous waste. Destroy excess sulphide, neutralise and flush the solution down the drain.
Untreated product:	Dispose of solid product via a licensed disposal company to a hazardous waste disposal facility.
Packaging:	Treat contaminated packaging as solid product.

14. TRANSPORT INFORMATION

UN no:	1748.
IMDG class:	5.1
IMDG page:	5029 **OXIDISING SUBSTANCE**
Packing group:	II
ADR/RID:	5.1
EAC:	2WE
HIN:	50
EEC no:	231-908-7

15. REGULATORY INFORMATION

Hazard symbol(s):	O – Oxidising C – Corrosive

	N – Dangerous for the environment
Risk phrase(s):	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 phrase(s):	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 sheet.

16. OTHER INFORMATION

Disclaimer

The information contained in this document is intended to describe the product only in terms of health, safety and environmental requirements for the purposes of its safe handling, use and disposal and is to the best of Central Chemical Supplies Limited knowledge and belief correct. Central Chemical Supplies Limited Technical Services will be pleased to give further advice and assistance, but customers must satisfy themselves (by appropriate testing if necessary) that the product is suitable for their purposes and conditions of use and that their facilities and arrangements are suitable for handling or using the product. Accordingly Central Chemical Supplies Limited disclaims any liability for loss, injury or damage which may result from the use of the product, this information or from such advice and assistance save as may be expressly agreed under its terms of sale. This information does not comprise a technical or performance specification for the product and customers are referred to any relevant product technical information or specification issued by Central Chemical Supplies Limited.

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