



GRAYMONT

SAFETY DATA SHEET

HIGH CALCIUM QUICKLIME

Section 1. Identification

- Product name** : HIGH CALCIUM QUICKLIME
- Other means of identification** : Lime, Quicklime, Calcium Oxide, Burnt Lime, Unslaked Lime, Fluxing Lime.
- Product type** : Solid.
- Relevant identified uses of the substance or mixture and uses advised against**
- Identified uses** : Neutralisation, flocculation, flux(met.), caustic agent, absorption, stabilisation.
- Supplier/Manufacturer** : Graymont NZ
Hamilton Regional Office
214 Collingwood Street Level 4 Hamilton 3204
New Zealand
Phone (07) 839 3210
Toll Free 0800 245 463
Web Site: <http://onlime.co.nz/>
- Emergency telephone number (with hours of operation)** : National Poison Center: (0800) 764 766
Graymont: 07 839 3210

Section 2. Hazards identification

- HSNO Classification** : 8.2 - CORROSIVE TO DERMAL TISSUE - Category C
8.3 - CORROSIVE TO OCULAR TISSUE - Category A
9.1 - AQUATIC ECOTOXICITY - Category D

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is not classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

GHS label elements

- Signal word** : Danger
- Hazard statements** : Causes severe skin burns and eye damage.
Harmful to aquatic life.

Precautionary statements

- Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Do not breathe dust or mist. Wash thoroughly after handling.
- Response** : Immediately call a POISON CENTRE or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Storage** : Store to minimise dust generation.



Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol :



Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Lime, Quicklime, Calcium Oxide, Burnt Lime, Unslaked Lime, Fluxing Lime.

CAS number/other identifiers

CAS number : Not available.

EC number : Not available.

Ingredient name	% (w/w)	CAS number
Calcium oxide	90 - 100	1305-78-8

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source. However, using the sedimentation method set out in the draft European Standard followed by XRD analysis, all products were shown to have respirable crystalline silica content of <0.1%.

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, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Eye contact : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation : May cause respiratory irritation.
Ingestion : No known significant effects or critical hazards.
Skin contact : Causes severe burns.
Eye contact : Causes serious eye damage.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
Ingestion : Adverse symptoms may include the following:
 stomach pains
Skin : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
Eyes : Adverse symptoms may include the following:
 pain
 watering
 redness

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments : Not available.
Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.
Not suitable : Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of quicklime.
Specific hazards arising from the chemical : This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products : None.
Hazchem code : Not available.
Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Firefighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. (pH increase).

Methods and material for containment and cleaning up

Spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container.

Section 7. Handling and storage

Precautions for safe handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store to minimise dust generation. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Calcium oxide	NZ HSWA 2015 (New Zealand, 6/2016). WES-TWA: 2 mg/m ³ 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Section 8. Exposure controls/personal protection

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. 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. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Solid. [Crystalline.]
- Colour** : White.
- Odour** : Odourless + soil like smell.
- Odour threshold** : Not available.
- pH** : 12.45 [Sat. soln.] at 25°C
- Melting point** : 2570 to 2625°C (4658 to 4757°F)
- Boiling point** : 2850°C (5162°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 3.25 to 3.28

Section 9. Physical and chemical properties

Solubility	: Not available.
Solubility in water	: 0.125 g/100 g at 20°C
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
<u>Aerosol product</u>	
Type of aerosol	: Not applicable.
Heat of combustion	: Not available.
Ignition distance	: Not applicable.
Enclosed space ignition - Time equivalent	: Not applicable.
Enclosed space ignition - Deflagration density	: Not applicable.
Flame height	: Not applicable.
Flame duration	: Not applicable.

Section 10. Stability and reactivity

Chemical stability	: The product is stable. Absorbs moisture and Carbon Dioxide in the air to form Calcium Hydroxide and Calcium Carbonate.
Possibility of hazardous reactions	: Exothermic reaction to water.
Conditions to avoid	: Do not allow quicklime to come into contact with incompatible materials. e.g. Water, acids, reactive fluoridated compounds, reactive brominated compounds. reactive powdered metals, organic acid anhydrides, nitro-organic compounds, reactive phosphorous compounds, interhalogenated compounds.
Incompatible materials	: Reactive or incompatible with the following materials: oxidising materials, acids and moisture.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

Inhalation	: May cause respiratory irritation.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: Causes severe burns.
Eye contact	: Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	: Adverse symptoms may include the following: stomach pains

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitisation

There is no data available.

Potential chronic health effects

- General** : Causes damage to organs through prolonged or repeated exposure.
- Inhalation** : Repeated exposure may cause severe mucous membrane irritation, bronchitis and pneumonia.
- Ingestion** : Repeated exposure may cause severe mucous membrane irritation, bronchitis and pneumonia.
- Skin contact** : Prolonged exposure may cause irritant dermatitis.
- Eye contact** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Chronic toxicity

There is no data available.

Carcinogenicity

There is no data available.

Mutagenicity

There is no data available.

Teratogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Specific target organ toxicity

There is no data available.

Aspiration hazard

There is no data available.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Ecotoxicity : This material is harmful to aquatic life.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	46 days

Persistence/degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Calcium oxide	-	2.34	low

Mobility in soil


Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	New Zealand Class	IMDG	IATA
UN number	Not regulated.	Not regulated.	UN1910
UN proper shipping name	-	-	CALCIUM OXIDE
Transport hazard class(es)	-	-	8 
Packing group	-	-	III

PG* : Packing group

Section 15. Regulatory information

HSNO Approval Number	: Calcium Oxide: HSR002926 High Calcium Quicklime: None available
HSNO Group Standard	: Not available.
HSNO Classification	: 8.2 - CORROSIVE TO DERMAL TISSUE - Category C 8.3 - CORROSIVE TO OCULAR TISSUE - Category A 9.1 - AQUATIC ECOTOXICITY - Category D
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.

Section 16. Other information

History

Prepared by	: KMK Regulatory Services Inc.
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Prepared by	: KMK Regulatory Services Inc.
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

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