



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **High Calcium Lime Kiln Dust**
Product Use: Neutralisation, Stabilisation, Absorption, Biosolids Stabilisation.
Restriction of Use in NZ: Refer to Section 15
New Zealand Supplier: **Graymont NZ**
Address: Hamilton Regional Office
214 Collingwood Street, Level 4
Hamilton, 3204
Telephone: +64 7 839 3210
Toll Free 0800 245 463
Emergency No: 0800 764 766 (National Poison Centre)
Website: www.graymont.com
Date of SDS Preparation: 5 October 2022

Section 2. Hazards Identification

Classified as hazardous as per EPA Hazardous Substances (Classification) Notice 2020.

EPA Approval No: Construction Products (Corrosive, Carcinogenic) – HSR002543

Pictograms



Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Carcinogenicity Cat. 1	H350	May cause cancer.
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin corrosion Cat. 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage Cat. 1	H318	Causes serious eye damage.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust, fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective clothing as detailed in Section 8.

P281	Use personal protective equipment as required.
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Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P301 + P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities as per Section 13.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Limestone	80 - 100	1317-65-3
Calcium Oxide	0 - 55	1305-78-8
Magnesium Oxide	1 - 5	1309-48-4
Calcium Hydroxide	1 - 5	1305-62-0
Crystalline Silica	0.0001 - 1	14808-60-7

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source and fuel type.

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	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.
If on Skin	Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. 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
If Swallowed	Get medical attention immediately. Wash out mouth with water. Remove dentures if any. 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

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and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

If Inhaled

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.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: No known significant effects or critical hazards. Over exposure: stomach pains.

Inhalation: May cause respiratory irritation. Over exposure: respiratory tract irritation, Coughing.

Skin: Causes severe burns. Over exposure: pain or irritation, redness and blistering may occur.

Eye: Causes serious eye damage. Over exposure: pain, watering and redness.

Chronic: May cause damage to organs through repeated or prolonged exposure. May cause cancer.

Notes to Doctor: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Decomposition products may include the following materials: carbon dioxide metal oxide/oxides
Suitable Extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Precautions for firefighters and special protective clothing	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. 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. Move containers from fire area if this can be done without risk. 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.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Personal precautions:

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 or air). Water polluting material. May be harmful to the environment if released in large quantities. (pH increase).

Spill and Disposal procedures:

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Scoop up material and place in a disposal container. Provide ventilation. Dispose of waste safely, according to local Council regulations as per Section 13.

Small Spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container.

Large 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 Handling:**

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust, fumes, gas, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
- 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.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Keep out of reach of children.
- Store locked up.
- 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**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance		TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Limestone (Calcium carbonate)	[1317-65-3]	-	10	-	-
Calcium oxide	[1305-78-8]	-	2	-	-
Magnesium oxide fume	[1309-48-4]	-	10	-	-

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Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

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.

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.

Personal Protection Equipment



Eyes	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.
Hands	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.
Skin	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.
Respiratory	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.
General	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.

Section 9 Physical and Chemical Properties

Appearance	Solid
Colour	White to dark grey
Odour	Earthy (slight)
Odour Threshold	Not available
pH	12.45 @ 25°C
Boiling Point	2850°C

Melting Point	2570 to 2625°C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not Flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	2.4 to 3.4
Water Solubility	0.125g/100g at 20°C
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	The product is stable. Absorbs moisture and Carbon Dioxide in the air to form Calcium Hydroxide and Calcium Carbonate.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	No specific data.
Incompatible Materials	Boron trifluoride, chlorine trifluoride, ethanol, fluorine, hydrogen fluoride, phosphorus pentoxide; water and acids (violent reaction with generating heat and possible explosion in confined area).
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable however over exposure could cause stomach pains. Repeated exposure may cause severe mucous membrane irritation, bronchitis and pneumonia.
Dermal	Not applicable.
Inhalation	Not applicable may include respiratory tract irritation and coughing.
Eye	Causes serious eye damage. Symptoms may include pain, watering and redness.
Skin	Causes severe burns. Symptoms include pain or irritation, redness and blistering may occur. Prolonged exposure may cause irritant dermatitis.

Chronic Effects:

Carcinogenicity	May cause cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through repeated or prolonged exposure. Repeated exposure may cause severe mucous membrane irritation, bronchitis and pneumonia.

Acute toxicity for components.

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Calcium Hydroxide :
LC50 oral mouse = 7340 mg/kg (rat)

Section 12. Ecotoxicological Information

This material is harmful to aquatic life.

Persistence and degradability	No data available
Bioaccumulation	Calcium Oxide: BCF = 2.34 Potential: Low
Mobility in Soil	No data available
Other adverse effects	No data available

Product/ingredient	Result	Species	Exposure
Calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	46 days
Calcium Hydroxide	Acute LC50 33884.4 µg/L Fresh water	Fish - Clarias gariepinus - Fingerling	96 hours

Section 13. Disposal Considerations

Disposal Method:

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.

Precautions or methods to avoid: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ; NZS 5433:2020

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: **Construction Products (Corrosive, Carcinogenic) – HSR002543**

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000kg
Emergency Response Plan	1000kg
Secondary Containment	1000kg
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

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Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

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Please contact the New Zealand distributor, if further information is required.

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