Safety Data Sheet (SDS)

The content and format of this SDS is accordant with Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (CLASS)

1. Identification of the hazardous chemical and of the supplier

Product name: GRAYMONT MALAYSIA QUICKLIME

Synonyms: Crushed Low-Quartz Quicklime / Milled Low-Quartz Quicklime

Recommended use of the chemical and restrictions on use: Used in sugar processing, road stabilisation and metallurgical processing. Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

Manufacturer/Supplier: GRAYMONT (ABN 20 004 406 688)

Address: Level 9, 118 Mount St North Sydney, NSW 2060, Australia

Tel: 1800 931 063

Fax: --

Email: --

Emergency phone number (in Malaysia): 60 3 6207 4347 (English, Malaysian)

Available 24 hours a day / 7 days a week

Emergency phone number (Asia-Pacific countries outside Malaysia): 65 3158 1074 (English, Bengali, Cantonese, Indonesian, Hindi, Japanese, Korean, Malay, Sinhalese, Urdu, Tagalog, Thai, Vietnamese)

Available 24 hours a day / 7 days a week

2. Hazards identification

Malaysia classification:

Physical hazards:	Not classified
Health hazards:	Skin corrosion/irritation - Category 1
	Serious eye damage/eye irritation - Category 1
	Carcinogenicity - Category 1A
	Specific target organ toxicity, single exposure - Category 3 (Respiratory tract irritation)
	Specific target organ toxicity, repeated exposure - Category 2 (lung)
Environmental hazards:	Not classified

Signal Word: **Danger**

Pictogram:

Hazard Statements:

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

H350: May cause cancer.

H373: May cause damage to organs through prolonged or repeated exposure (lung).

Precautionary Statements:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P281: Use personal protective equipment as required.

Response Precautionary Statements:

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.

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.

P321: Specific treatment (Please see the specific measures for accident that included in the label, or go to hospital for treatment.)

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.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P314: Get medical advice/attention if you feel unwell.

Storage precautionary statements:

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal precautionary statements:

P501: Dispose of contents/container according to relevant local and national regulations (It is recommended to use methods of neutralization to dispose of waste).

3. Composition/information on ingredients

Product description: substance (); preparation/mixture (√)

Ingredient (s)	CAS No.	EC No.	% by weight
Calcium oxide	1305-78-8	215-138-9	＞92
Calcite (Ca (CO_3))	--	--	＜6
Crystalline Silica (Quartz)	14808-60-7	238-878-4	＜2
Other minerals	Mixture	--	＜1
Ingredients determined not to be hazardous	--	--	Balance

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

· Any concentration shown as a range is to protect confidentiality or is due to batch variation. If a generic chemical name is shown and/or the CAS number is not disclosed, the specific chemical identity has been withheld as a trade secret.

· There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

4. First-aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product results in injury. Specific first-aid measures are as follows:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eyes Contact: 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.

Ingestion: Rinse mouth. Do not induce vomiting without doctor's instruction. Get medical advice/attention if you feel unwell.

Acute effect and delayed effect:

Acute effect: Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.

Delayed effect: May cause cancer. May cause damage to organs through prolonged or repeated exposure (lung).

Personal protective equipment: Wear protective gloves/protective clothing/eye protection/face protection when necessary.

Indication of immediate medical attention and treatment needed, if necessary: Treat according to symptoms and exposure dose.

5. Fire-fighting measures

Suitable extinguishing media: Use carbon dioxide or dry chemical.

Unsuitable extinguishing media: Do not use water.

Special hazards arising from the chemical: The product is not combustible. Reacts violently with water; reaction may generate enough heat to ignite surrounding combustible materials. Under fire conditions this product may emit toxic and/or corrosive fumes and dust of calcium oxide.

Fire Fighting Method:

Shut off air supply.

Extinguish fire from upwind and cool down containers by water spray.

Remove containers from fire area if it can be done without risk.

Deny unnecessary entry to the place around the fire.

Firefighters must wear self-contained breathing apparatus and full protective equipment.

Special actions for fire-fighters: Firefighters must wear self-contained breathing apparatus and full protective equipment.

Check whether the protective equipment is in good condition before use.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use proper personal protective equipment as indicated in Section 8.

Environmental precautions: Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

Methods and material for containment and cleaning up:

Collect it into a proper container for disposal.
Avoid generating dust during collection and clean-up.

7. Handling and storage

Precautions for safe handling:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Inspect regularly for deficiencies such as damage or leaks. Store in original packages as approved by manufacturer. Ensure that storage conditions comply with applicable local and national regulations.

Incompatible substances or mixtures: Strong oxidising agents, strong acids, ammonium salts and fluorine.

Packing material: No information available.

8. Exposure controls/personal protection

Occupational Exposure Limits:

Ingredients	Malaysia PELs	ACGIH TLV-TWA
Calcium oxide (CAS: 1305-78-8)	2 mg/m^3	2 mg/m^3
Crystalline Silica (Quartz) (CAS: 14808-60-7) ※	0.1 mg/m^3	0.025 mg/m^3

※: Crystalline silica is a Category 1A carcinogen.

※: TWA (Time Weighted Average): Defined as time-weighted average concentration limits for a normal 8-hour workday, with a total of 40 hours per week.
No biological limits allocated.

Engineering Controls:

Use this product only in closed systems fully or with local exhaust ventilation.
Install emergency eyewash and shower equipment in accordance with national regulations, and / or most recent ANSI Z358.1 requirements.

Personal Protective Equipment (for workers):

Protection of Hands: Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Protection of Eyes: Tight-fitting safety glasses with full face shield should be used. Eye protection should conform to relevant local and national regulations.

Respiratory Protection: If engineering controls are not effective in controlling airborne concentrations below exposure standards, then approved respirators with replaceable high-efficiency particulate filters should be used. Refer to relevant local and national regulations for further information.

Protection of Body: Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

9. Physical and chemical properties

General Information	
Form	Solid (Powder)
Colour	Off-white
Odour	No data available
pH	12.0 (aqueous slurry)
Melting point/freezing point	2572°C (calcium oxide)
Initial boiling point and boiling range	No data available
Flash Point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	This product is not classified as flammable solid.
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available

Specific Gravity	3.32-3.35
Solubility(ies)	Soluble in water forming calcium hydroxide and generating a large quantity of heat.
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

10. Stability and reactivity

Reactivity and Chemical stability: This product is considered to be a non-reactive material under normal and anticipated storage and handling conditions.

Possibility of hazardous reactions: Reactivity with water - Heat may cause ignition of combustibles. Material swells during reaction.

Conditions to Avoid: Extremes of temperature, dust accumulation and direct sunlight. Moisture and wet conditions. Dusty conditions.

Incompatible materials: Strong oxidising agents, strong acids, ammonium salts and fluorine.

Hazardous decomposition products: Under fire conditions this product may emit toxic and/or corrosive fumes and dust of calcium oxide.

11. Toxicological information

Product Toxicity Data:

Ingredient (s)	**CAS No.**	**LD_{50}/LC_{50} (Median lethal dose)**
Calcium oxide	1305-78-8	Acute toxicity (oral) LD_{50}＞2,000 mg/kg (rat) Data source: ECHA Acute toxicity (dermal) LD_{50}＞2500 mg/kg (rabbit) Data source: ECHA Acute toxicity (inhalation: dust) LC_{50}＞6.04 mg/L/4h (rat) Data source: ECHA
Calcite (Ca (CO_3))	--	No data available
Crystalline Silica (Quartz)	14808-60-7	No data available
Other minerals	Mixture	No data available
Classification of the whole product:		Not classified.

Skin corrosion/irritation	Calcium oxide (CAS: 1305-78-8): Category 2 (Data source: ECHA) Classification of the whole product: Category 1 (pH=12.0)
Serious eye damage/eye irritation	Calcium oxide (CAS: 1305-78-8): Category 1 (Data source: ECHA) Classification of the whole product: Category 1 (pH=12.0)
Respiratory sensitizer	No classification for this product.
Skin sensitizer	No classification for this product.
Germ cell mutagenicity	No classification for this product.
Carcinogenicity	Crystalline Silica (Quartz) (CAS: 14808-60-7): Category 1A (Data source: IARC-1)

	Classification of the whole product: Category 1A
Reproductive Toxicity	No classification for this product.
Specific target organ toxicity, single exposure	Calcium oxide (CAS: 1305-78-8): Category 3 (Respiratory tract irritation) (Data source: ECHA) Classification of the whole product: Category 3 (Respiratory tract irritation)
Specific target organ toxicity, repeated exposure	Crystalline Silica (Quartz) (CAS: 14808-60-7): Category 1 (lung) (Data source: ECHA) Classification of the whole product: Category 2 (lung)
Aspiration hazard	No classification for this product.
Effects on or via lactation	No classification for this product.

Ingestion	Ingestion of this product will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach. Burns maybe thermal as well as caustic due to the reaction of calcium oxide with moisture on the mucous membranes producing calcium hydroxide and heat.
Inhalation	Dust generated will cause irritation with possible burns to the mucous membrane and upper airways. May cause respiratory irritation. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system. Symptoms may include coughing, lesions of the nasal septum, severe pain and may lead to permanent tissue scarring. Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even aft er exposure has ceased and may also lead to other diseases including heart disease and scleroderma. Exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema, and asthma. Chronic exposure to this material may aggravate existing respiratory disorders and lung disorders such as bronchitis, emphysema, and asthma. Onset and progression are related to dust concentrations and duration of exposure.
Skin	Causes burns. Corrosive to the skin. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Eye	Causes eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness. May react with moisture and protein in the eye to form clumps of moist compound which are difficult to remove. May cause permanent eye injury.

12. Ecological information

Ecotoxicity:

Calcium oxide (CAS: 1305-78-8):

96h- LC_{50}: 457 mg/L, fish (Gasterosteus aculeatus) (ECHA)

Classification of the whole product: Not classified.

Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.
Environmental Protection: Prevent this material from entering waterways, drains, and sewers.

13. Disposal considerations

Waste treatment methods:
It is recommended to use methods of neutralization to dispose of waste
Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.
After contents are completely removed, dispose of its container at hazardous or special waste collection point.
Paste a label on the container indicating the possible hazards of the waste.

14. Transport Information

DOT/Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG:

Marine Transport (IMO/IMDG): Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
SP 106: Subject to these Regulations only when transported by air.

UN proper shipping name: CALCIUM OXIDE
Transport hazard class(es): 8
UN number: 1910
Packing Group: III
Packing Group Symbol:

Marine Pollutant (Yes/No): No
EMS NO.: Not applicable

Note:
Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

15. Regulatory information

Malaysia:

Hazard Classification according to MS 1804:2008:

Physical hazards:	Not classified
Health hazards:	Skin corrosion/irritation - Category 1
	Serious eye damage/eye irritation - Category 1
	Carcinogenicity - Category 1A
	Specific target organ toxicity, single exposure - Category 3 (Respiratory tract irritation)
	Specific target organ toxicity, repeated exposure - Category 2 (lung)
Environmental hazards:	Not classified

Occupational Safety and Health Act 1994: As for safety use, control of major hazards, notification of accident and other relevant information, see specific regulations of this Act.

United States:

TSCA (Toxic Substance Control Act):

Ingredient (s)	CAS No.	TSCA Inventory
Calcium oxide	1305-78-8	Listed
Crystalline Silica (Quartz)	14808-60-7	Listed

Clean Water Act:

Chemical Name	Reportable Quantities	Hazardous Substances	Priority Pollutants	Toxic Pollutants
Not applicable	Not applicable	Not listed	Not listed	Not listed

Carcinogenicity categories: Crystalline Silica (Quartz) (CAS: 14808-60-7): IARC-1.

EU:

(EC) 1272/2008 Annex VI Table 3.1:

Ingredient(s)	EC No. 1272/2008 Classification	
	CLASS. CODE	HAZARD CODE
Not applicable	Not applicable	Not applicable

Candidate List of Substances of very high concern (SVHC) according to ECHA: Not listed.

REACH Regulation Annex XVII Regulation List: Not listed.

REACH Regulation Annex XIV Authorization List: Not listed.

Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

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endeavour to provide all reasonable assistance to remedy the problem. It is ultimately the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

References:

GHS SDS Instruction
The Malaysian Standard on Globally Harmonised System (GHS) for Classification and Labelling of Chemicals (MS 1804:2008)
Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (CLASS)
The Industry Code of Practice on Chemical Classification and Hazard Communication 2014 (ICOP)

Full description of some acronyms:

GHS-Globally Harmonized System of Classification and Labelling of Chemicals
CAS-Chemical Abstracts Service
EINECS-European Inventory of Existing Commercial Chemical Substances
IMO-International Maritime Organization
IMDG-International Maritime Dangerous Goods
IATA-International Air Transport Association
ICAO-International Civil Aviation Organization
TSCA-Toxic Substances Control Act
OSHA-Occupational Safety and Health Administration
ACGIH-American Conference of Governmental Industrial Hygienists

The issuing date of the latest version: February 8, 2024
SDS Version: 1.1

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