SAFETY DATA SHEET
GRANULIME

Section 1. Identification

GHS product identifier : GRANULIME
Code : Not available.
Other means of identification : Granulime, Limestone, Calcium Carbonate, Calcite.
Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Mineral filler, animal feed ingredient, pesticide carrier.
Supplier/Manufacturer : GRAYMONT
#200-10991 Shellbridge Way
Richmond, BC V6X 3C6
Canada
Phone: 1 604 207-4292
Toll free: 1 866 207-4292
Fax: 1 604 207-9014
Web Site: http://www.graymont.com/

Emergency telephone number (with hours of operation) : CHEMTREC, US (800-424-9300)
INTERNATIONAL: (703-527-3887)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : CARCINOGENICITY (inhalation) - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1
GHS label elements
Hazard pictograms :

Signal word : Danger
Hazard statements : H350 - May cause cancer if inhaled.
H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory tract)
Precautionary statements
Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P260 - Do not breathe dust.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.
Section 2. Hazards identification

**Response**
- P314 - Get medical attention if you feel unwell.
- P308 + P313 - IF exposed or concerned: Get medical attention.

**Storage**
- P401 - Store to minimize dust generation.

**Disposal**
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified**
- None known.

Section 3. Composition/information on ingredients

**Substance/mixture**
- Mixture

**Other means of identification**
- Granulime, Limestone, Calcium Carbonate, Calcite.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>0.0001 - 1</td>
<td>14808-60-7</td>
</tr>
</tbody>
</table>

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

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**

**Eye contact**
- 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. Get medical attention.

**Inhalation**
- Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. 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**
- Wash contaminated skin with soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**
- 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. Get medical attention. 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.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact**
- No known significant effects or critical hazards.
Section 4. First aid measures

Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

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.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical

Hazardous thermal decomposition products : Decomposition products may include the following materials:
- carbon dioxide
- metal oxide/oxides

Special protective actions 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.

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

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Section 6. Accidental release measures

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled 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).

Methods and materials for containment and cleaning up

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. 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.

Advice on general occupational hygiene: 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. See also Section 8 for additional information on hygiene measures.

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 minimize 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>OSHA PEL Z3 (United States, 6/2016). TWA: 250 mppcf 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ Form: Total dust</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2013). TWA: 0.05 mg/m³ 10 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ Form: Total dust</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 50 μg/m³ 8 hours. Form: Respirable dust</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2017). TWA: 0.025 mg/m³ 8 hours. Form: Respirable</td>
</tr>
<tr>
<td></td>
<td>MSHA PEL TWA 8/40 hours: 30 mg/m³ (%SiO2)+2 mg/m³ Form: Total dust</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

10 mg/m³/(%SiO₂)+2 mg/m³ Form: Respirable dust

Canada

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>CA British Columbia Provincial (Canada, 6/2017). TWA: 0.025 mg/m³ 8 hours. Form: Respirable dust</td>
</tr>
<tr>
<td></td>
<td>CA Quebec Provincial (Canada, 1/2014). TWA: 0.1 mg/m³ 8 hours. Form: Respirable dust</td>
</tr>
<tr>
<td></td>
<td>CA Ontario Provincial (Canada, 1/2018). TWA: 0.1 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada, 7/2013). TWA: 0.05 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate.</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: If user operations generate dust, fumes, gas, vapor 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. Engineering controls may be required to control the primary or secondary risks associated with this product.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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.

Eye/face 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: safety glasses with side-shields.

Skin protection

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.

Body 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.

Other skin protection: Appropriate footwear and any additional skin protection measures 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 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.
Section 9. Physical and chemical properties

**Appearance**

- **Physical state**: Solid. [Granular solid.]
- **Color**: Dark brown to dark gray.
- **Odor**: Odorless.
- **Odor threshold**: Not available.
- **pH**: 8 to 9.2 at 25°C
- **Melting point**: Not available.
- **Boiling point**: Not available.
- **Flash point**: Not applicable.
- **Evaporation rate**: Not applicable.
- **Flammability (solid, gas)**: Not applicable.
- **Lower and upper explosive (flammable) limits**: Not applicable.
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **Relative density**: 2.68 to 2.76
- **Solubility in water**: 0.00066 g/100g at 20°C
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not applicable.
- **Decomposition temperature**: 870°C (1598°F)
- **Viscosity**: Not available.
- **Flow time (ISO 2431)**: Not available.

Section 10. Stability and reactivity

**Reactivity**

- No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**

- The product is stable.

**Possibility of hazardous reactions**

- Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid**

- No specific data.

**Incompatible materials**

- Reactive or incompatible with the following materials: oxidizing materials and acids.

**Hazardous decomposition products**

- Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
There is no data available.

Irritation/Corrosion
There is no data available.

Sensitization
There is no data available.

Mutagenicity
There is no data available.

Carcinogenicity

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
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<tbody>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>-</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
</tr>
</tbody>
</table>

Reproductive toxicity
There is no data available.

Teratogenicity
There is no data available.

Specific target organ toxicity (single exposure)
There is no data available.

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica, respirable powder</td>
<td>Category 1</td>
<td>respiratory tract</td>
</tr>
</tbody>
</table>

Aspiration hazard
There is no data available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.
Section 11. Toxicological information

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure.
Carcinogenicity : May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.
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.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

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 minimized 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 spilled material and runoff and contact with waterways, drains and sewers.
Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>IMDG</th>
<th>IATA</th>
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<tr>
<td>UN proper</td>
<td>-</td>
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<tr>
<td>Packing group</td>
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<tr>
<td>Environmental</td>
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</tr>
<tr>
<td>hazards</td>
<td></td>
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</tr>
</tbody>
</table>

AERG : Not applicable.

Special precautions for user : Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : United States inventory (TSCA 8b): All components are listed or exempted.
RCRA classification: Not listed or classified.
CWA-311: Not listed.
CERCLA: Not listed.
FDA: Limestone has been determined as “Generally Recognized As Safe” (GRAS) by FDA. See 21CFR184.1409. (CFR Title 21 Part 184 - - Direct food substances affirmed as generally recognized as safe). Calcium lignosulfonate may be safely used in or on food, subject to the provisions of section CFR Title 21 part 172.715.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed
SARA 302/304 Composition/information on ingredients : No products were found.
SARA 304 RQ : Not applicable.
SARA 311/312 : Not applicable.
Section 15. Regulatory information

**Classification**

<table>
<thead>
<tr>
<th>Name</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Crystalline silica, respirable powder | CARCINOGENICITY - Category 1A  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1 |

**State regulations**

- **Massachusetts**: The following components are listed: Limestone; Crystalline silica, respirable powder
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: Limestone; Crystalline silica, respirable powder
- **Pennsylvania**: The following components are listed: Limestone; Crystalline silica, respirable powder

**California Prop. 65**

**WARNING**: This product can expose you to Crystalline silica, respirable powder, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

**Canadian lists**

- **Canada inventory (DSL NDSL)**: All components are listed or exempted.
- **Canadian NPRI**: None of the components are listed.
- **CEPA Toxic substances**: None of the components are listed.

Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 *</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

**National Fire Protection Association (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Procedure used to derive the classification**
Section 16. Other information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARCINOGENICITY (inhalation) - Category 1A</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

### History

**Date of issue mm/dd/yyyy**: 02/15/2019
**Date of previous issue**: 01/15/2018
**Version**: 4
**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
- UN = United Nations

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.