**Dritherm**

**Revision Date:** 15/Jul/2014  
**Revision Number:** 1.0

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### 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Dritherm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Name</strong></td>
<td>Limestone</td>
</tr>
</tbody>
</table>
| **Company** | Dritherm International Inc.  
2500 Plaza 5  
Harborside Fincial Center  
Jersey City, NJ 07311  
USA  
Tel: 973-808-2255  
Fax: 973-808-2815 |
| **Emergency Telephone** | 973-808-2255 |
| **Internet** | www.dritherm.com |
| **Email** | info@dritherm.com |

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### 2. HAZARD IDENTIFICATION

**Emergency overview:**  This is a non-combustible, odorless white powder.

**Potential Health Effects**

- **Sensitization:** Does not cause sensitization.
- **Eye contact:** Dust may cause mechanical irritation to eyes.
- **Eye irritation:** Slightly irritating, not classified.
- **Skin contact:** Dries skin and mucous membranes.
- **Skin irritation:** Possible dry skin and mucous membranes.
- **Inhalation:** Causes respiratory tract irritation if inhaled.
- **Carcinogenicity:** This product contains greater than 0.1% crystalline silica which is listed as a Group 1 carcinogen by IARC, a known carcinogen by NTP, OSHA and as A2 suspected human carcinogen by ACGIH.

**Potential environmental effects**  Not considered to be harmful to aquatic life.

**Environmental Exposure:**  This product does not present any particular risk for the environment. Check the appropriate national and local regulations before the product is washed into the sewer.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT(S) / CAS</th>
<th>EC / REACH</th>
<th>EU CLP Classification</th>
<th>%W/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone - CAS: 1317-65-3</td>
<td>215-279-6</td>
<td>Not classified</td>
<td>78.8</td>
</tr>
<tr>
<td>215-279-6</td>
<td>Exempt*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stearic Acid - CAS: 57-11-4</td>
<td>200-313-4</td>
<td>Not classified</td>
<td>1 - 5</td>
</tr>
<tr>
<td>200-313-4</td>
<td>Exempt*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline Silica, quartz (impurity) - CAS: 14808-60-7</td>
<td>238-878-4</td>
<td>Not classified</td>
<td>0.1 - 5.0</td>
</tr>
<tr>
<td>Crystalline Silica, quartz (impurity) - CAS: 14808-60-7</td>
<td>238-878-4</td>
<td>Not classified</td>
<td>0.1 - 5.0</td>
</tr>
</tbody>
</table>

Limestone - CAS: 1317-65-3
Regulation (EC) 1907/2006: REACH
*Exempt as a naturally occurring substance.

Stearic Acid - CAS: 57-11-4
*Contact JM Huber for REACH Regulatory Status

Crystalline Silica, quartz (impurity) - CAS: 14808-60-7
*Exempt. An impurity

4. FIRST AID MEASURES

Eye contact
Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

Skin contact
Wash skin with soap and water.

Inhalation
Remove person to fresh air.

General Advice
In case of doubt or when symptoms persist, seek medical attention.
5. FIRE-FIGHTING MEASURES

<table>
<thead>
<tr>
<th>NFPA: Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>PPE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>E</td>
</tr>
<tr>
<td>HMIS: Health</td>
<td>Flammability</td>
<td>Physical hazard</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Extinguishing media

All extinguishing media can be used. Use suitable media appropriate for the surrounding fire. Non-combustible.

Unsafe extinguishing media: None.

Special exposure hazards: None.

Special protective equipment for firefighters

Firefighters should wear protective clothing and use equipment that is suitable for the materials involved in the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with skin and eyes. Wear suitable personal protection equipment. Avoid inhalation of dust.

Environmental precautions

This product is not expected to cause an environmental hazard as a result of its intended use, disposal, or incineration.

Cleanup methods

Pick up mechanically and / or by rinsing with water. Avoid dry sweeping and use a sprinkler system or exhaust ventilation to prevent dust formation.

7. HANDLING AND STORAGE

Handling

Avoid dust formation. Provide appropriate exhaust ventilation in places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage

Store in a dry area. Keep containers closed and protect from physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls

Engineering Controls: Use mechanical ventilation (dilution and local exhaust) to control exposure.

Nuisance particles/

ACGIH: 10 m/g3 (total dust), 3 mg/m³ (respirable fraction)

Nuisance dust:

OSHA PEL: 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction)
Eye Protection: Safety glasses with side shields.

Skin and Body Protection: Use suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure.

Hand Protection: Impervious gloves: chemical resistant. EN 420

Respiratory Protection: In case of exposure to high levels of airborne dust, wear a respirator EN 149, P2 half masks. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposures exceeds established guidelines.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure: This product does not present any particular risk for the environment. Check the appropriate national and local regulations before the product is washed into the sewer.

Control Parameters

Exposure Limit Values:

**Limestone - CAS: 1317-65-3**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Canada - Alberta - OEL</th>
<th>Canada - British Columbia - OEL</th>
<th>Canada - Manitoba - OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA - TWA</td>
<td>10 mg/m³ (total dust)</td>
<td>3 mg/m³ (respirable fraction); 10 mg/m³ (total dust)</td>
<td>Not established</td>
</tr>
<tr>
<td>ACGIH - TLV-TWA 8-hour</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>NIOSH - TWAs</td>
<td>10 mg/m³</td>
<td>3 mg/m³</td>
<td>20 mg/m³</td>
</tr>
<tr>
<td>NIOSH - Target Organs</td>
<td>skin</td>
<td>respiratory system</td>
<td>eyes</td>
</tr>
</tbody>
</table>

**Stearic Acid - CAS: 57-11-4**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Canada - Alberta - OEL</th>
<th>Canada - British Columbia - OEL</th>
<th>Canada - Newfoundland &amp; Labrador</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA - TWA</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>ACGIH - TLV-TWA 8-hour</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>NIOSH - TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>NIOSH - Target Organs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Crystalline Silica, quartz (impurity) - CAS: 14808-60-7**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Canada - Alberta - OEL</th>
<th>Canada - British Columbia - OEL</th>
<th>Canada - Manitoba - OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA - TWA</td>
<td>(10 mg/m³)/(%SiO₂ + 2) (respirable)</td>
<td>(30 mg/m³)/(%SiO₂ + 2) (Total Dust)</td>
<td>Not established</td>
</tr>
<tr>
<td>ACGIH - TLV-TWA 8-hour</td>
<td>0.025 mg/m³ TWA (respirable fraction)</td>
<td>0.05 mg/m³</td>
<td>Not established</td>
</tr>
<tr>
<td>NIOSH - TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>NIOSH - Potential Occupational Carcinogens</td>
<td>potential occupational carcinogen</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Canada - Alberta - OEL</td>
<td>0.025 mg/m³ TWA (respirable particulate)</td>
<td>0.025 mg/m³ TWA (respirable fraction)</td>
<td>Not established</td>
</tr>
<tr>
<td>Canada - British Columbia - OEL</td>
<td>0.025 mg/m³</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Canada - British Columbia - OEL - TWAs</td>
<td>ACGIH Category A2 - Suspected Human Carcinogen</td>
<td>IARC Category 1 - Human Carcinogen</td>
<td>Not established</td>
</tr>
<tr>
<td>Canada - Manitoba - OEL - TWA</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Canada - Newfoundland &amp; Labrador</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White Powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>8.4 - 10.2, (5% water suspension)</td>
</tr>
<tr>
<td>Freeze Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>2.7 g/cm³ @ 20°C</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>1.3 g/l @ 20°C</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>700-900°C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>None</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable under normal conditions</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>Hazardous polymerization will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None</td>
</tr>
<tr>
<td>Materials to avoid (Incompatible Materials)</td>
<td>Strong Acids</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>None</td>
</tr>
</tbody>
</table>
11. TOXICOLOGICAL INFORMATION

Toxicological Data Sources
Data from the scientific literature on components are summarized below.

Chronic toxicity
No evidence of mutagenic or reproductive effects.

Carcinogenicity:
This product contains greater than 0.1% crystalline silica which is listed as a Group 1 carcinogen by IARC, a known carcinogen by NTP, OSHA and as A2 suspected human carcinogen by ACGIH.

Limestone - CAS: 1317-65-3
LD50 Oral 6450 mg/kg (rat)

Stearic Acid - CAS: 57-11-4
Toxicology Data - Selected LD50s and LC50s
5 g/kg Dermal LD50 Rabbit
LD50 Dermal >5000 mg/kg (rabbit)

Crystalline Silica, quartz (impurity) - CAS: 14808-60-7
IARC - Group 1 (Carcinogenic to Humans)
dated 1977
LD50 Oral 500 mg/kg (rat)

Potential Health Effects

Sensitization
Does not cause sensitization.

Eye irritation
Slightly irritating, not classified.

Skin irritation
Possible dry skin and mucous membranes.

Inhalation
Contains crystalline silica which can be absorbed into the body by inhalation and may have effects on the lungs, resulting in fibrosis (silicosis).

12. ECOLOGICAL INFORMATION

Ecotoxicity
This product is not expected to be toxic to aquatic life.

Persistence / Degradability
Non-degradable

Bioaccumulative potential
None

Mobility
Inert material.

Other Adverse Effects
None known.

Limestone - CAS: 1317-65-3
Germany - Water Classification (VwVwS) - Annex 1 317 : 0

Stearic Acid - CAS: 57-11-4
Germany - Water Classification (VwVwS) - Annex 1 661 not considered hazardous to water
13. DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS: Dispose in accordance with local, state and national regulations.

Limestone - CAS: 1317-65-3
European Waste Catalogue (EWC): 10130414

14. TRANSPORT INFORMATION

UN-No
None.

Proper Shipping Name
Refer to Sections 1 and 3 for product name and chemical name(s)

IMO / IMDG
Not a dangerous substance.

ICAO / IATA
Not a dangerous substance.

RID/ADR
Not a dangerous substance.

D.O.T. Hazard Classification
Non-hazardous material.

General Information
The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Other information
Environmental hazards: None known
Special precautions for user: Refer to Sections 2, 7, 8, 9, 10

15. REGULATORY INFORMATION

Component(s) of the product are on the following Inventory lists:

<table>
<thead>
<tr>
<th>COMPONENT(S) / CAS</th>
<th>EC / REACH</th>
<th>Australia (AICS)</th>
<th>Canada (IECSC)</th>
<th>China (KECL)</th>
<th>Japan</th>
<th>Korea (KECL)</th>
<th>New Zealand (NZIoC)</th>
<th>Philippines (PICCS)</th>
<th>USA (TSCA)</th>
<th>Taiwan (ECN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone - CAS: 1317-65-3</td>
<td>218-279-6 Exempt*</td>
<td>Present</td>
<td>Present (NDSL)*</td>
<td>Present</td>
<td>(1)-122</td>
<td>KE-21998</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Nominated</td>
</tr>
<tr>
<td>Stearic Acid - CAS: 57-11-4</td>
<td>200-313-4 Exempt*</td>
<td>Present</td>
<td>Present (DSL)</td>
<td>Present</td>
<td>(2)-609 (ENCS)</td>
<td>28333</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Nominated</td>
</tr>
<tr>
<td>Crystalline Silica, quartz (impurity) - CAS: 14808-60-7</td>
<td>238-878-4 Exempt*</td>
<td>Present</td>
<td>Present (DSL)</td>
<td>Present</td>
<td>(1)-648 (ENCS)</td>
<td>KE-29983</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>-</td>
</tr>
</tbody>
</table>
Legend
PRESENT : Listed
- : Not Listed
Exempt
Nominated

**Limestone - CAS: 1317-65-3**

Regulation (EC) 1907/2006: REACH
*Exempt as a naturally occurring substance.

**Stearic Acid - CAS: 57-11-4**

*Contact JM Huber for REACH Regulatory Status

**Crystalline Silica, quartz (impurity) - CAS: 14808-60-7**

*Exempt. An impurity

**EPA:**

- **SARA 311 / 312 HAZARD:** None
- **SARA 313:** None
- **CERCLA RQ:** None

**Clean Water Act:** The components of this product are not regulated under any of the following sections of the Clean Water Act: Section 307 Priority Pollutants or Section 311 Hazardous Substances. It would be regulated under 304 Water Quality Criteria Substances for suspended solids.

**Clean Air Act:** The components of this product are not regulated under any of the following sections of the Clean Air Act: Section 112 Hazardous Air Pollutants, Section 112 Statutory Air Pollutants, Section 112 High-Risk Pollutants, Section 112(r) Accidental Release Prevention Substances or Section 602 Ozone Depleting Substance. As a powder product, it would be regulated under Section 109 Criteria Pollutants particulates.

**States Right-to-Know (RTK):**

- **California Proposition 65:** The product contains the following chemicals at levels known to the State of California to cause cancer:
  - Crystalline Silica (14808-60-7): carcinogen, initial date 10/1/88 (airborne particles of respirable size)

  **CONEG** The heavy metals defined in CONEG are not intentionally introduced to this product and with respect to heavy metals, lead and arsenic, the level is less than 100 ppm.

  **CANADA**

  **WHMIS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.