SECTION 1. IDENTIFICATION

Manufacturer or supplier’s details
Company name of supplier : Bestolife Corporation
Address : 2126 Vanco Drive
           Irving TX 75061,
Telephone : 855-243-9164/972-865-8961
Telefax  : 214-631-3047
                      (24-hours/7 days)
E-mail address : www.bestolife.com

Recommended use of the chemical and restrictions on use
Recommended use : Industrial use
                  Thread Compound (Pipe Dope) and Jacking grease for use in
                  Offshore industries
                  Mining, (without offshore industries)
Restrictions on use : Do not use on oxygen lines or in oxygen enriched atmos-
                     pheres.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR
1910.1200)
Eye irritation : Category 2A

GHS label elements

Hazard pictograms : [Image]

Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.

Precautionary Statements : Prevention:
                           P264 Wash skin thoroughly after handling.
                           P280 Wear eye protection and face protection.

                          Response:
                          P305 + P351 + P338 IF IN EYES: Rinse cautiously with water
                          for several minutes. Remove contact lenses, if present and easy
                          to do. Continue rinsing.
                          P337 + P313 If eye irritation persists: Get medical attention.

Other hazards
None known.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td></td>
<td>Graphite</td>
<td>7782-42-5</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td></td>
<td>Talc</td>
<td>14807-96-6</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Calcium acetate</td>
<td>62-54-4</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>Dolomite</td>
<td>16389-88-1</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td></td>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td></td>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td></td>
<td>Quartz</td>
<td>14808-60-7</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes serious eye irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray, Alcohol-resistant foam, Carbon dioxide (CO2), Dry chemical
SAFETY DATA SHEET

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Advice on safe handling : For outdoor use only
Do not get on skin or clothing.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Store in accordance with the particular national regulations.
**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable particulate matter)</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST (Mist)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>TWA (Respirable)</td>
<td>2.5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable particulate matter)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust)</td>
<td>15 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>TWA (Dust)</td>
<td>20 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable)</td>
<td>2 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable particulate matter)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>TWA (Respirable)</td>
<td>5 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Dolomite</td>
<td>16389-88-1</td>
<td>TWA (Respirable)</td>
<td>5 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>
These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

- Titanium dioxide
- Quartz

### Occupational exposure limits of decomposition products

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>TWA (Respirable)</td>
<td>5 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³ (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>TWA</td>
<td>250 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,400 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>590 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>Fluoride (Fluorine)</td>
<td>Urine</td>
<td>Prior to shift (16 hours after)</td>
<td>2 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

---

Titanium dioxide

Quartz
### Engineering measures

Processing may form hazardous compounds (see section 10). Minimize workplace exposure concentrations. Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m³ - total dust, 5 mg/m³ - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m³ - respirable particles, 10 mg/m³ - inhalable particles.

### Personal protective equipment

#### Respiratory protection

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

#### Hand protection

**Material**: Chemical-resistant gloves

**Remarks**: Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

#### Eye protection

Wear the following personal protective equipment:

- Safety goggles

#### Skin and body protection

Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

#### Hygiene measures

If exposure to chemical is likely during typical use, provide
When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Viscous semi-solid

Color : light gray

Odor : Petroleum

Odor Threshold : No data available

pH : Not applicable (not an aqueous solution)

Melting point/freezing point : No data available

Initial boiling point and boiling range : 406 °F / 208 °C
Method: ASTM D 2887
Distillates (petroleum), hydrotreated light naphthenic

Flash point : 320 °F / 160 °C
Method: Cleveland open cup
Distillates (petroleum), hydrotreated light naphthenic

Evaporation rate : Not applicable

Flammability (solid, gas) : Not classified as a flammability hazard

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Relative density : 1.3

Density : No data available

Solubility(ies)
Water solubility : negligible

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : 914 °F / 490 °C
Method: ASTM E 659

Decomposition temperature : No data available
### Viscosity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>2.085 mm²/s (104 °F / 40 °C)</td>
</tr>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
</tr>
<tr>
<td></td>
<td>20.85 cSt (104 °F / 40 °C)</td>
</tr>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
</tr>
</tbody>
</table>

| Flow time                     | No data available                          |

### Explosive properties

- Not explosive

### Oxidizing properties

- The substance or mixture is not classified as oxidizing.

### Molecular weight

- No data available

### Particle size

- No data available

### SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Not classified as a reactivity hazard.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
</tbody>
</table>
| Possibility of hazardous reac-
  tions                        | Can react with strong oxidizing agents.     |
|                               | Hazardous decomposition products will be formed at elevated temperatures. |
| Conditions to avoid           | None known.                                |
| Incompatible materials        | Oxidizing agents                           |

### Hazardous decomposition products

- Calcium carbonate
- Acetone

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

- Skin contact
- Ingestion
- Eye contact

### Acute toxicity

- Not classified based on available information.

#### Product:

- **Acute oral toxicity**:  
  - Acute toxicity estimate: > 5,000 mg/kg  
  - Method: Calculation method

#### Components:

- Distillates (petroleum), hydrotreated light naphthenic:
  - Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
### Method: OECD Test Guideline 401

**Acute inhalation toxicity**
- LC50 (Rat): > 5.53 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
- Assessment: The substance or mixture has no acute inhalation toxicity

**Acute dermal toxicity**
- LD50 (Rabbit): > 2,000 mg/kg
- Assessment: The substance or mixture has no acute dermal toxicity

---

### Graphite:

**Acute oral toxicity**
- LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 423
  - Assessment: The substance or mixture has no acute oral toxicity

**Acute inhalation toxicity**
- LC50 (Rat): > 2 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: OECD Test Guideline 403

---

### Talc:

**Acute oral toxicity**
- LD50 (Rat): > 5,000 mg/kg
  - Remarks: Based on data from similar materials

---

### Calcium carbonate:

**Acute oral toxicity**
- LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 420
  - Assessment: The substance or mixture has no acute oral toxicity

**Acute inhalation toxicity**
- LC50 (Rat): > 3 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: OECD Test Guideline 403
  - Assessment: The substance or mixture has no acute inhalation toxicity

**Acute dermal toxicity**
- LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 402
  - Assessment: The substance or mixture has no acute dermal toxicity

---

### Calcium acetate:

**Acute oral toxicity**
- LD50 (Rat): 1,943 mg/kg
  - Method: OECD Test Guideline 401

**Acute inhalation toxicity**
- LC50 (Rat): > 5.6 mg/l
  - Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**Acute dermal toxicity**

LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

**Calcium fluoride:**

**Acute oral toxicity**

LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

**Acute inhalation toxicity**

LC50 (Rat): > 5.07 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

**Dolomite:**

**Acute oral toxicity**

LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

**Acute inhalation toxicity**

LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

**Acute dermal toxicity**

LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

**Titanium dioxide:**

**Acute oral toxicity**

LD50 (Rat): > 5,000 mg/kg

**Acute inhalation toxicity**

LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**Calcium oxide:**

**Acute oral toxicity**

LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
Acute inhalation toxicity: (Rat): > 5 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Method: OECD Test Guideline 436
   Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rabbit): > 2,500 mg/kg
   Method: OECD Test Guideline 402
   Assessment: The substance or mixture has no acute dermal toxicity
   Remarks: Based on data from similar materials

Quartz:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light naphthenic:
Species: Rabbit
Result: No skin irritation

Graphite:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Talc:
Species: Rabbit
Result: No skin irritation

Calcium carbonate:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Calcium acetate:
Species: Rabbit
Result: No skin irritation

Calcium fluoride:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Dolomite:
Species: Rabbit
### Method
- Titanium dioxide: OECD Test Guideline 404
- Calcium oxide: OECD Test Guideline 404
- Distillates (petroleum), hydrotreated light naphthenic: OECD Test Guideline 405
- Graphite: OECD Test Guideline 405
- Talc: OECD Test Guideline 405
- Calcium carbonate: OECD Test Guideline 405
- Calcium acetate: OECD Test Guideline 405
- Calcium fluoride: OECD Test Guideline 405
- Dolomite: OECD Test Guideline 405

### Result
- Titanium dioxide: No skin irritation
- Calcium oxide: Skin irritation
- Distillates (petroleum), hydrotreated light naphthenic: No eye irritation
- Graphite: No eye irritation
- Talc: No eye irritation
- Calcium carbonate: No eye irritation
- Calcium acetate: No eye irritation
- Calcium fluoride: No eye irritation
- Dolomite: No eye irritation

### Remarks
- Based on data from similar materials

### Serious eye damage/eye irritation
Causes serious eye irritation.

### Components
- **Titanium dioxide:**
  - Species: Rabbit
  - Result: No skin irritation
- **Calcium oxide:**
  - Species: Rabbit
  - Method: OECD Test Guideline 404
  - Result: Skin irritation
  - Remarks: Based on data from similar materials
- **Distillates (petroleum), hydrotreated light naphthenic:**
  - Species: Rabbit
  - Result: No eye irritation
- **Graphite:**
  - Species: Rabbit
  - Result: No eye irritation
  - Method: OECD Test Guideline 405
- **Talc:**
  - Species: Rabbit
  - Result: No eye irritation
- **Calcium carbonate:**
  - Species: Rabbit
  - Result: No eye irritation
  - Method: OECD Test Guideline 405
- **Calcium acetate:**
  - Species: Rabbit
  - Result: No eye irritation
- **Calcium fluoride:**
  - Species: Rabbit
  - Result: No eye irritation
  - Method: OECD Test Guideline 405
- **Dolomite:**
  - Species: Rabbit
  - Result: No eye irritation
Titanium dioxide:
Species: Rabbit
Result: No eye irritation

Calcium oxide:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

Respiratory or skin sensitization
Skin sensitization
Not classified based on available information.
Respiratory sensitization
Not classified based on available information.

Components:
Distillates (petroleum), hydrotreated light naphthenic:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Graphite:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Talc:
Routes of exposure: Skin contact
Species: Humans
Result: negative

Calcium carbonate:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

Calcium fluoride:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
SAFETY DATA SHEET

Method: OECD Test Guideline 429
Result: negative

Dolomite:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
Remarks: Based on data from similar materials

Titanium dioxide:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Calcium oxide:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity
Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light naphthenic:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Graphite:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

**Talc:**
Genotoxicity in vitro:
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  Result: negative

Genotoxicity in vivo:
- Test Type: Chromosome aberration test in vitro
  Species: Rat
  Application Route: Ingestion
  Result: negative

**Calcium carbonate:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative

  Test Type: Chromosome aberration test in vitro
  Method: OECD Test Guideline 473
  Result: negative

  Test Type: In vitro mammalian cell gene mutation test
  Method: OECD Test Guideline 476
  Result: negative

**Calcium acetate:**
Genotoxicity in vitro:
- Test Type: Chromosome aberration test in vitro
  Result: negative
  Remarks: Based on data from similar materials

Genotoxicity in vivo:
- Species: Mouse
  Application Route: Ingestion
  Result: negative
  Remarks: Based on data from similar materials

**Calcium fluoride:**
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative
  Remarks: Based on data from similar materials

  Test Type: In vitro mammalian cell gene mutation test
  Method: OECD Test Guideline 476
  Result: negative
  Remarks: Based on data from similar materials

  Test Type: Chromosome aberration test in vitro
  Method: OECD Test Guideline 473
  Result: negative
  Remarks: Based on data from similar materials
Dolomite:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Titanium dioxide:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo:
Species: Mouse  
Result: negative

Calcium oxide:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vitro: Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Carcinogenicity
Not classified based on available information.

Product:
Carcinogenicity - Assessment: Petroleum distillates have been classified as not carcinogenic based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Components:
Distillates (petroleum), hydrotreated light naphthenic:
Species: Mouse  
Application Route: Skin contact  
Exposure time: 78 weeks  
Result: negative

Talc:
Species: Mouse  
Application Route: Inhalation (dust/mist/fume)  
Exposure time: 2 Years  
Result: negative
### Calcium fluoride:
- **Species**: Mouse
- **Application Route**: Ingestion
- **Result**: negative
- **Remarks**: Based on data from similar materials

### Titanium dioxide:
- **Species**: Rat
- **Application Route**: Inhalation (dust/mist/fume)
- **Exposure time**: 2 Years
- **Method**: OECD Test Guideline 453
- **Result**: positive
- **Remarks**: The mechanism or mode of action may not be relevant in humans.

### Calcium oxide:
- **Species**: Rat
- **Application Route**: Ingestion
- **Exposure time**: 104 weeks
- **Result**: negative
- **Remarks**: Based on data from similar materials

### Quartz:
- **Species**: Humans
- **Application Route**: Inhalation (dust/mist/fume)
- **Result**: positive
- **Remarks**: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

### Carcinogenicity - Assessment:
- **IARC**: Group 1: Carcinogenic to humans
- **Quartz**
  - (Silica dust, crystalline) 14808-60-7
- **Group 2B**: Possibly carcinogenic to humans
  - Titanium dioxide 13463-67-7

- **OSHA**: OSHA specifically regulated carcinogen
  - Quartz 14808-60-7 (crystalline silica)

- **NTP**: Known to be human carcinogen
  - Quartz 14808-60-7 (Silica, Crystalline (Respirable Size))
Reproductive toxicity
Not classified based on available information.

Components:

**Distillates (petroleum), hydrotreated light naphthenic:**

- Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Result: negative

- Effects on fetal development: Test Type: Embryo-fetal development  
  Species: Rat  
  Application Route: Skin contact  
  Result: negative

**Graphite:**

- Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Method: OECD Test Guideline 422  
  Result: negative

- Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Method: OECD Test Guideline 422  
  Result: negative

**Talc:**

- Effects on fetal development: Test Type: Embryo-fetal development  
  Species: Rat  
  Application Route: Ingestion  
  Result: negative

**Calcium carbonate:**

- Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Method: OECD Test Guideline 422  
  Result: negative

- Effects on fetal development: Test Type: Embryo-fetal development  
  Species: Rat  
  Application Route: Ingestion  
  Method: OECD Test Guideline 414  
  Result: negative

**Calcium acetate:**
Effects on fertility: Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

**Calcium fluoride:**

Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

**Dolomite:**

Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

**Calcium oxide:**

Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Mouse
STOT-single exposure
Not classified based on available information.

Components:

Calcium oxide:
Assessment: May cause respiratory irritation.

STOT-repeated exposure
Not classified based on available information.

Components:

Calcium fluoride:
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Quartz:
Routes of exposure: inhalation (dust/mist/fume)
Target Organs: Lungs
Assessment: Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

Repeated dose toxicity

Components:

Distillates (petroleum), hydrotreated light naphthenic:
Species: Rabbit
NOAEL: 1,000 mg/kg
Application Route: Skin contact
Exposure time: 4 Weeks
Method: OECD Test Guideline 410

Calcium carbonate:
Species: Rat
NOAEL: > 1,000 mg/kg
Application Route: Ingestion
Exposure time: 28 Days
Method: OECD Test Guideline 422

Calcium acetate:
Species: Rat
NOAEL: >= 3,600 mg/kg
Application Route: Ingestion
Exposure time: 28 Days
Remarks: Based on data from similar materials
Calcium fluoride:
Species: Rat
NOAEL: 0.007 mg/kg
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days
Method: OECD Test Guideline 412
Remarks: Based on data from similar materials

Dolomite:
Species: Mouse
NOAEL: 1,300 mg/kg
Application Route: Ingestion
Exposure time: 28 Days
Remarks: Based on data from similar materials

Titanium dioxide:
Species: Rat
NOAEL: 24,000 mg/kg
Application Route: Ingestion
Exposure time: 28 Days

Species: Rat
NOAEL: 10 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 2 y

Calcium oxide:
Species: Rat
NOAEL: >= 0.399 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 90 Days
Method: OECD Test Guideline 413

Quartz:
Species: Humans
LOAEL: 0.053 mg/m³
Application Route: inhalation (dust/mist/fume)
Remarks: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Distillates (petroleum), hydrotreated light naphthenic:
Toxicity to fish: LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction

Toxicity to algae/aquatic plants: NOELR (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d

Toxicity to microorganisms: NOEC (Photobacterium phosphoreum): > 2.17 mg/l
Exposure time: 4 d

**Graphite:**

Toxicity to fish: LL50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC50: > 1,012.5 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

**Talc:**

Toxicity to fish: LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l
Exposure time: 24 h

**Calcium carbonate:**

Toxicity to fish: LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
**Test substance:** Water Accommodated Fraction  
**Method:** OECD Test Guideline 203

### Toxicity to daphnia and other aquatic invertebrates

| Test substance | EC50 (Daphnia magna (Water flea)): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 48 h  
| Test substance | Water Accommodated Fraction  
| Method | OECD Test Guideline 202

### Toxicity to algae/aquatic plants

| Test substance | NOELR (Pseudokirchneriella subcapitata (green algae)): 50 mg/l  
|----------------|------------------------------------------------  
| Exposure time | 72 h  
| Test substance | Water Accommodated Fraction  
| Method | OECD Test Guideline 201

**Remarks:** Based on data from similar materials

### Toxicity to microorganisms

| Test substance | EC50: > 1,000 mg/l  
|----------------|-------------------  
| Exposure time | 3 h  
| Method | OECD Test Guideline 209

### Calcium acetate:

#### Toxicity to fish

| Test substance | LC50 (Danio rerio (zebra fish)): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 96 h  
| Method | OECD Test Guideline 203  
| Remarks | Based on data from similar materials

#### Toxicity to daphnia and other aquatic invertebrates

| Test substance | EC50 (Daphnia magna (Water flea)): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 48 h  
| Method | OECD Test Guideline 202  
| Remarks | Based on data from similar materials

#### Toxicity to algae/aquatic plants

| Test substance | ErC50 (Skeletonema costatum (marine diatom)): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 72 h  
| Remarks | Based on data from similar materials

| Test substance | NOEC (Skeletonema costatum (marine diatom)): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 72 h  
| Remarks | Based on data from similar materials

#### Toxicity to microorganisms

| Test substance | EC50 (Pseudomonas putida): > 100 mg/l  
|----------------|-----------------------------------------  
| Exposure time | 16 h  
| Method | DIN 38 412 Part 8  
| Remarks | Based on data from similar materials

### Calcium fluoride:

#### Toxicity to fish

| Test substance | LC50: > 100 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants

EC50: > 10 - 100 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

NOEC: > 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity)

NOEC (Oncorhynchus mykiss (rainbow trout)): > 1 - 10 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials

Toxicity to microorganisms

NOEC (Protozoa): > 10 - 100 mg/l
Exposure time: 20 h
Remarks: Based on data from similar materials

Dolomite:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): > 16.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility. Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 16.6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility. Based on data from similar materials

Toxicity to algae/aquatic plants

NOEC (Desmodesmus subspicatus (green algae)): 14 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Titanium dioxide:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants

EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
Exposure time: 72 h

Toxicity to microorganisms: EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

**Calcium oxide:**

Exposure time: 3 h

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: ER50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Crangon crangon (shrimp)): > 1 mg/l
Exposure time: 14 d
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

**Quartz:**

Ecotoxicology Assessment

Acute aquatic toxicity: No toxicity at the limit of solubility.

Chronic aquatic toxicity: No toxicity at the limit of solubility.

Persistence and degradability

Components:

**Distillates (petroleum), hydrotreated light naphthenic:**

Biodegradability: Result: Not readily biodegradable.
Biodegradation: 2 - 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Calcium acetate:

Biodegradability: Result: Readily biodegradable.
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Calcium acetate:
Partition coefficient: n-octanol/water: log Pow: -1.38

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good
SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Serious eye damage or eye irritation

SARA 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6
Synthetic polyol ester Not Assigned
Graphite 7782-42-5
Talc 14807-96-6
Calcium carbonate 471-34-1
Calcium(2+) 12-hydroxyoctadecanoate 3159-62-4
Calcium acetate 62-54-4
Calcium fluoride 7789-75-5
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8

California Prop. 65
WARNING: This product can expose you to chemicals including Titanium dioxide, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6
Graphite 7782-42-5
Talc 14807-96-6
Calcium carbonate 471-34-1
Calcium fluoride 7789-75-5
Calcium oxide 1305-78-8

California Permissible Exposure Limits for Chemical Contaminants
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6
Graphite 7782-42-5
Talc 14807-96-6
Calcium carbonate 471-34-1
Calcium fluoride 7789-75-5
Titanium dioxide 13463-67-7
Calcium oxide 1305-78-8

California Regulated Carcinogens
Quartz 14808-60-7
The ingredients of this product are reported in the following inventories:

DSL: All components of this product are on the Canadian DSL

TSCA: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

HMIS® IV:

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH: USA. ACGIH Threshold Limit Values (TLV)

ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)

NIOSH REL: USA. NIOSH Recommended Exposure Limits

OSHA CARC: OSHA Specifically Regulated Chemicals/Carcinogens

OSHA Z-1: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

OSHA Z-3: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

ACGIH / TWA: 8-hour, time-weighted average

ACGIH / STEL: Short-term exposure limit

NIOSH REL / TWA: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

NIOSH REL / ST: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

OSHA CARC / PEL: Permissible exposure limit (PEL)

OSHA Z-1 / TWA: 8-hour time weighted average

OSHA Z-3 / TWA: 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the
Sources of key data used to compile the Material Safety Data Sheet:

Revision Date: 11/04/2020

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.