Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name · Green-Seal® II
Synonyms · Lubricant; Sealant; Thread Compound

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s) · Anti-Seize, Lubricant, Sealant, Casing & Tubing Compound

1.3 Details of the supplier of the safety data sheet
Manufacturer · Topco Oilsite Products Ltd.
Bay 7, 3401 - 19th Street N.E.
Calgary, Alberta T2E 6S8
Canada
www.topcooilsite.com
msds@topcooilsite.com

Telephone (General) · 403-219-0255

1.4 Emergency telephone number
Manufacturer · 403-219-0255
Poison & Drug Information Service (Alberta Health Services) · 1-800-332-1414

Section 2: Hazards Identification

EU/EEC

2.1 Classification of the substance or mixture
CLP · Not classified

2.2 Label Elements
CLP
Hazard statements · No label element(s) required

2.3 Other Hazards
CLP · According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

UN GHS Revision 4
According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Fourth Revised Edition

2.1 Classification of the substance or mixture
UN GHS · Skin Mild Irritation 3
Hazardous to the aquatic environment Acute 3
2.2 Label elements
UN GHS

WARNING

Hazard statements • Causes mild skin irritation
                  Harmful to aquatic life

Precautionary statements

Prevention • Avoid release to the environment.
Response • If skin irritation occurs: Get medical advice/attention.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards
UN GHS

• According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous

United States (US)
According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture
OSHA HCS 2012 • Not classified

2.2 Label elements
OSHA HCS 2012

Hazard • No label element(s) required statements

2.3 Other hazards
OSHA HCS 2012 • This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada
According to: WHMIS 2015

2.1 Classification of the substance or mixture
WHMIS 2015 • Not classified

2.2 Label elements
WHMIS 2015

Hazard statements • No label element(s) required
Precautionary statements

2.3 Other hazards
WHMIS 2015 • In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients
### 3.1 Substances

- Material does not meet the criteria of a substance.

### 3.2 Mixtures

#### Composition

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic</td>
<td>CAS:64741-88-4</td>
<td>35%</td>
<td>Ingestion/Oral-Rat LD50 &gt;5000 mg/kg</td>
<td>EU CLP: Annex VI, Table 3.1: Carc. 1B, H350&lt;br&gt;UN GHS Revision 4: Skin Irrit. 3; Asp. Tox. 2&lt;br&gt;OSHA HCS 2012: Not Classified&lt;br&gt;WHMIS 2015: Not Classified</td>
<td>this ingredient contains &lt; 3% DMSO</td>
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<tr>
<td></td>
<td>EC Number:265- 090-8</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>EU Index:649- 454-00-7</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin-Rabbit LD50 &gt;2000 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>54%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>CAS:7782-42-5</td>
<td>15%</td>
<td>NDA</td>
<td>EU CLP: STOT RE 1 (Lungs / Inhl), H372&lt;br&gt;UN GHS Revision 4: STOT RE 1 (Lungs / Inhl)&lt;br&gt;OSHA HCS 2012: Comb. Dust; STOT RE 1 (Lungs / Inhl)&lt;br&gt;WHMIS 2015: Comb. Dust; STOT RE 1 (Lungs / Inhl)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC Number:231- 955-3</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talc</td>
<td>CAS:14807-96- 6</td>
<td>&lt; 10%</td>
<td>NDA</td>
<td>EU CLP: STOT RE 1 (Lungs / Inhl), H372&lt;br&gt;UN GHS Revision 4: Skin Irrit. 3; STOT RE 1 (Lungs / Inhl)&lt;br&gt;OSHA HCS 2012: STOT RE 1 (Lungs / Inhl)&lt;br&gt;WHMIS 2015: STOT RE 1 (Lungs / Inhl)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC Number:238- 877-9</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethene, homopolymer</td>
<td>CAS:9002-88-4</td>
<td>&lt; 10%</td>
<td>Ingestion/Oral-Rat LD50 &gt;8 g/kg</td>
<td>EU CLP: Not Classified&lt;br&gt;UN GHS Revision 4: Not Classified&lt;br&gt;OSHA HCS 2012: Comb. Dust&lt;br&gt;WHMIS 2015: Comb. Dust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inhalation-Rat LC50 75.5 g/m³ 30 Minute(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Black</td>
<td>CAS:1333-86-4</td>
<td>&lt; 5%</td>
<td>Ingestion/Oral-Rat LD50 &gt;15400 mg/kg</td>
<td>EU CLP: Carc. 2, H351; STOT RE 1, H372&lt;br&gt;UN GHS Revision 4: Carc. 2; STOT RE 1 (Lungs, Inhl); Acute Tox. 5 (skin)&lt;br&gt;OSHA HCS 2012: Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust&lt;br&gt;WHMIS 2015: Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC Number:215- 609-9</td>
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</tr>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt</td>
<td>CAS:26264-06- 2</td>
<td>0.5%</td>
<td>Ingestion/Oral-Rat LD50 1300 mg/kg</td>
<td>EU CLP: Acute Tox. 4, H302&lt;br&gt;UN GHS Revision 4: Acute Tox. 4 (orl); Aquatic Acute 2&lt;br&gt;OSHA HCS 2012: Acute Tox. 4 (orl)&lt;br&gt;WHMIS 2015: Acute Tox. 4 (orl)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EINECS:247- 557-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>CAS:68584-23- 6</td>
<td>0.5%</td>
<td>NDA</td>
<td>EU CLP: Not Classified&lt;br&gt;UN GHS Revision 4: Not Classified&lt;br&gt;OSHA HCS 2012: Not Classified&lt;br&gt;WHMIS 2015: Not Classified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EINECS:271- 529-4</td>
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</tbody>
</table>

See Section 16 for full text of H-statements.

### Section 4 - First Aid Measures

#### 4.1 Description of first aid measures
**Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.

**Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

**Ingestion**
- Obtain medical attention immediately if ingested.

### 4.2 Most important symptoms and effects, both acute and delayed
- Refer to Section 11 - Toxicological Information.

### 4.3 Indication of any immediate medical attention and special treatment needed
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media
- **Suitable Extinguishing Media**
  - LARGE FIRE: Water spray, fog or regular foam.
  - SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

- **Unsuitable Extinguishing Media**
  - No data available

### 5.2 Special hazards arising from the substance or mixture
- **Unusual Fire and Explosion Hazards**
  - No data available

- **Hazardous Combustion Products**
  - Hazardous decomposition products formed under fire conditions: Carbon oxides, metal oxides.

### 5.3 Advice for firefighters
- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures
- **Personal Precautions**
  - Ventilate the area. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

- **Emergency Procedures**
  - Keep unauthorized personnel away. Stay upwind.

### 6.2 Environmental precautions
- Avoid run off to waterways and sewers.

### 6.3 Methods and material for containment and cleaning up
- **Containment/Clean-up Measures**
  - Stop leak if you can do it without risk.
    - SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
    - LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

### 6.4 Reference to other sections
- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling
- **Handling**
  - Use only with adequate ventilation. Keep away from heat and ignition sources. Use good safety and industrial hygiene practices. Wear appropriate personal protective equipment, avoid direct contact. Avoid
contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage  • Keep container tightly closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)
• Refer to Section 1.2 - Relevant identified uses.

---

### Section 8 - Exposure Controls/Personal Protection

#### 8.1 Control parameters

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines</th>
<th>Result</th>
<th>ACGIH</th>
<th>Argentina</th>
<th>Australia</th>
<th>Canada Alberta</th>
<th>Canada British Columbia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</td>
<td>3 mg/m³ TWA (inhalable particulate matter)</td>
<td>3.5 mg/m³ TWA [CMP]</td>
<td>3 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>3 mg/m³ TWA (inhalable)</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (particulate matter containing no asbestos and &lt;1% crystalline silica, respirable particulate matter)</td>
<td>2 mg/m³ TWA [CMP] (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica)</td>
<td>2.5 mg/m³ TWA (containing no asbestos fibers)</td>
<td>2 mg/m³ TWA (respirable particulate)</td>
<td>2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable particulate)</td>
</tr>
<tr>
<td></td>
<td>TWAs</td>
<td>2 mg/m³ TWA (all forms except graphite fibers, respirable particulate matter)</td>
<td>2 mg/m³ TWA [CMP] (all forms except fibers, respirable fraction)</td>
<td>3 mg/m³ TWA containing no asbestos and &lt;1% crystalline silica; all forms except fibres; natural and synthetic, respirable dust</td>
<td>2 mg/m³ TWA (all forms except Graphite fibres, respirable)</td>
<td>2 mg/m³ TWA (all forms except Graphite fibres, respirable)</td>
</tr>
<tr>
<td>Graphite</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (all forms except graphite fibers, respirable particulate matter)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable fraction)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable particulate matter)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable fraction)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable particulate matter)</td>
<td>2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable fraction)</td>
<td>2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable particulate matter)</td>
<td>2 mg/m³ TWA (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>4 mg/m³ STEL (natural, all forms, except Graphite fibres, respirable fraction)</td>
<td>Not established</td>
<td>4 mg/m³ STEL (natural, all forms, except Graphite fibres, respirable fraction)</td>
</tr>
</tbody>
</table>

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### Exposure Limits/Guidelines (Con't.)

#### Result | Canada Manitoba | Canada New Brunswick | Canada Northwest Territories | Canada Nova Scotia | Canada Nunavut |
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</td>
<td>3 mg/m³ TWA (inhalable particulate matter)</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>3 mg/m³ TWA (inhalable)</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable particulate matter)</td>
<td>2 mg/m³ TWA [CMP] (particulate matter containing no Asbestos and less than 1% Crystalline silica)</td>
<td>2.5 mg/m³ TWA (containing no asbestos fibers)</td>
<td>2 mg/m³ TWA (respirable particulate)</td>
</tr>
<tr>
<td>Graphite</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (all forms except graphite fibers, respirable particulate matter)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable fraction)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable particulate matter)</td>
<td>2 mg/m³ TWA (natural, all forms, except Graphite fibres, respirable fraction)</td>
</tr>
<tr>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
<td>7 mg/m³ STEL</td>
<td>8 mg/m³ STEL (total dust)</td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
<td>7 mg/m³ STEL</td>
</tr>
<tr>
<td>TWAs</td>
<td>3 mg/m³ TWA (inhalable)</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>4 mg/m³ TWA (total dust)</td>
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<td>Substance</td>
<td>STELs</td>
<td>TWAs</td>
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<td></td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>Not established</td>
<td>2 mg/m³ TWA (containing no Asbestos and &lt;1% Crystalline silica, respirable)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ethene, homopolymer (9002-88-4)</td>
<td>Not established</td>
<td>Not established</td>
<td></td>
<td></td>
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<tr>
<td>Graphite</td>
<td>Not established</td>
<td>2 mg/m³ TWA (containing no Asbestos and &lt;1% Crystalline silica, respirable)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>STELs</th>
<th>TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>Not established</td>
<td>3.5 mg/m³ TWA [VME]</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Graphite (7782-42-5)</td>
<td>Not established</td>
<td>2 mg/m³ TWA [VME] (alveolar fraction)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>MAKs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc (14807-96-6)</td>
<td>Not established</td>
<td>1.5 mg/m³ TWA MAK (respirable fraction); 4 mg/m³ TWA MAK (inhalable fraction)</td>
</tr>
</tbody>
</table>

### Exposure Limits/Guidelines (Con’t.)

<table>
<thead>
<tr>
<th>Result</th>
<th>France</th>
<th>Germany DFG</th>
<th>Indonesia</th>
<th>Israel</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</td>
<td>3.5 mg/m³ TWA [VME]</td>
<td>Not established</td>
<td>3.5 mg/m³ TWA</td>
<td>3 mg/m³ TWA (inhalable fraction)</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>2 mg/m³ TWA (not containing fiber Asbestos, use NAB asbestos for talc containing fiber asbestos, respirable particulate)</td>
<td>4 mg/m³ TWA (airborne dust no otherwise classified); 2 mg/m³ TWA (particulate matter containing no Asbestos and &lt;1% crystalline silica, respirable fraction)</td>
</tr>
<tr>
<td>Graphite (7782-42-5)</td>
<td>TWAs</td>
<td>Not established</td>
<td>2 mg/m³ TWA</td>
<td>2 mg/m³ TWA (respirable fraction, all forms except graphite fibers)</td>
<td>2 mg/m³ TWA (Class 1 Dust, total dust); 0.5 mg/m³ OEL (Class 1 Dust, respirable dust)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>STELs</th>
<th>TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>Not established</td>
<td>7 mg/m³ STEL [PPT-CT]</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (respirable fraction of particulate matter)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result</th>
<th>Malaysia</th>
<th>Mexico</th>
<th>Netherlands</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
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<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>STELs</td>
<td>Not established</td>
<td>3.5 mg/m³ TWA</td>
<td>Not established</td>
<td>3.5 mg/m³ TWA; 0.1 mg/m³ TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)</td>
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<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>2 mg/m³ TWA (respirable fraction of particulate matter)</td>
<td>2 mg/m³ TWA VLE-PPT</td>
<td>0.25 mg/m³ TWA</td>
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<td>Designation</td>
<td>TWAs</td>
<td>STELs</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphite (7782-42-5)</td>
<td>2 mg/m3 TWA (natural, respirable dust); 10 mg/m3 TWA (synthetic, total dust); 5 mg/m3 TWA (synthetic, respirable fraction)</td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>2 mg/m3 TWA (all forms except Graphite fibres, respirable fraction); 2 mg/m3 TWA [VLE-PPT (synthetic and natural)]</td>
<td>Not established</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>2 mg/m3 TWA (synthetic, respirable dust); 5 mg/m3 TWA (all forms except Graphite fibres, respirable fraction)</td>
<td>Not established</td>
<td></td>
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</tr>
</tbody>
</table>

**Exposure Control Notations**

**Japan**
- Carbon Black (1333-86-4): **Carcinogens:** (Group 2B - Possibly Carcinogenic to Humans)

**Mexico**
- Talc (14807-96-6): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

**Egypt**
- Graphite (7782-42-5): **Nuisance Dusts:** (10 mg/m3 TWA (synthetic, containing <1% Quartz, total dust); 30 mppcf TWA (synthetic, containing <1% Quartz, total dust); 3 mg/m3 TWA (synthetic, containing <1% Quartz, total dust))

**Portugal**
- Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

**Indonesia**
- Talc (14807-96-6): **Carcinogens:** (A4 - not classifiable as a human carcinogen (not containing asbestos fiber))
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - not classifiable as a human carcinogen)

**Argentina**
- Talc (14807-96-6): **Carcinogens:** (A1 - Confirmed human carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not Classifiable as a human carcinogen)

**Canada British Columbia**
- Carbon Black (1333-86-4): **Carcinogens:** (IARC Category 2B - Possible Human Carcinogen) | **Designated Substances:** (IARC Category 2B - Possible Human Carcinogen)

**Canada Manitoba**
- Talc (14807-96-6): **Carcinogens:** (A4 Not Classifiable as a Human Carcinogen (containing no Asbestos fibers))
- Carbon Black (1333-86-4): **Carcinogens:** (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)

**Canada New Brunswick**
- Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
8.2 Exposure controls

Engineering Measures/Controls  • Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory  • In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face  • Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body  • Natural Rubber, latex gloves. Break through time: 4-8 Hours. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls  • Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
BEI = Biological Exposure Indices
MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures
TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description
Physical Form: Solid
Appearance/Description: Black semi-solid paste with mild petroleum odor.

Color: Black
Odor: Mild, petroleum.
Odor Threshold: Data lacking

General Properties
Boiling Point: Data lacking
Melting Point/Freezing Point: Data lacking
Decomposition Temperature: Data lacking
pH: Data lacking
Specific Gravity/Relative Density: Data lacking
Water Solubility: Data lacking
Viscosity: Data lacking
Explosive Properties: Data lacking
Oxidizing Properties: Data lacking

Vapor Pressure: Data lacking
Vapor Density: Data lacking
Evaporation Rate: Data lacking

Flammability
Flash Point: Data lacking
UEL: Data lacking
LEL: Data lacking
Autoignition: Data lacking
Flammability (solid, gas): Data lacking

Environmental
Octanol/Water Partition coefficient: Data lacking

9.2 Other Information
• No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity
• No dangerous reaction known under conditions of normal use.

10.2 Chemical stability
• Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions
• Hazardous polymerization will not occur.

10.4 Conditions to avoid
• Keep away from heat, sparks and flame.

10.5 Incompatible materials
• No data available

10.6 Hazardous decomposition products
• Hazardous decomposition products formed under fire conditions: Carbon oxides, metal oxides.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Components</th>
<th>Acute Toxicity: Ingestion/Oral-Rat LD50 • &gt;8 g/kg; Inhalation-Rat LC50 • 75.5 g/m³ 30 Minute(s); Tumorigenic / Carcinogenic:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, homopolymer (&lt; 10%)</td>
<td>Implant-Rat TDL0 • 33 mg/kg; Tumorogenic:Equivocal tumorigenic agent by RTECS criteria; Tumorogenic:Tumors at site of application</td>
<td></td>
</tr>
<tr>
<td>Talc (&lt; 10%)</td>
<td>Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Tumorigenic / Carcinogenic: Inhalation-Rat • 11 mg/m³ 1 Year(s)-Intermittent; Tumorogenic:Equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: Tumors; Inhalation-Rat TCL0 • 18 mg/m³ 6 Hour(s) 2 Year(s)-Intermittent; Tumorogenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Bronchiogenic carcinoma; Endocrine:Tumors</td>
<td></td>
</tr>
<tr>
<td>Carbon Black (&lt; 5%)</td>
<td>Acute Toxicity: Ingestion/Oral-Rat LD50 • &gt;15400 mg/kg; Behavioral:Somnolence (general depressed activity); Skin-Rabbit LD50 • &gt;3 g/kg; Mutagen: DNA adduct • Inhalation-Mouse • 6200 µg/m³ 16 Hour(s) 12 Week(s)-Intermittent; DNA</td>
<td></td>
</tr>
</tbody>
</table>
Benzenesulfonic acid, dodecyl-, calcium salt (0.5% TO 3%) 26264-06-2  

**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1300 mg/kg

<table>
<thead>
<tr>
<th>Potential Health Effects</th>
</tr>
</thead>
</table>

### GHS Properties Classification

<table>
<thead>
<tr>
<th></th>
<th>EU/CLP</th>
<th>UN GHS</th>
<th>OSHA HCS 2012</th>
<th>WHMIS 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
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<tr>
<td>Skin corrosion/Irritation</td>
<td>Data lacking</td>
<td>Skin Mild Irritation 3</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Serious eye damage/Irritation</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Skin sensitization</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Aspiration Hazard</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Carcinogenicity</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Germ Cell Mutagenicity</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>Toxicity for Reproduction</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<td>Data lacking</td>
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<tr>
<td>STOT-SE</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
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<tr>
<td>STOT-RE</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

*Inhalation-Rat • 50 µg/L 13 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 g/L 13 Week(s); Tumorigen / Carcinogen: Inhalation-Rat TCLo • 11600 µg/m³ 18 Hour(s) 2 Year(s)-Intermittent; Tumorigenic: Carcinogenic by RTECS criteria: Lungs, Thorax, or Respiration: Tumors*
**Inhalation**

- **Acute (Immediate)**: Under normal conditions of use, no health effects are expected.
- **Chronic (Delayed)**: No data available

**Skin**

- **Acute ( Immediate)**: Under normal conditions of use, no health effects are expected.
- **Chronic (Delayed)**: No data available

**Eye**

- **Acute (Immediate)**: Under normal conditions of use, no health effects are expected.
- **Chronic (Delayed)**: No data available

**Ingestion**

- **Acute (Immediate)**: May be harmful if swallowed.
- **Chronic (Delayed)**: No data available

**Carcinogenic Effects**

- This material contains a component that may cause cancer, however based on regulatory criteria this material is not classified as a carcinogen.

<table>
<thead>
<tr>
<th>Carcinogenic Effects</th>
<th>CAS</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>Group 2B - Possible Carcinogen</td>
</tr>
</tbody>
</table>

**Key to abbreviations**

- **LC** = Lethal Concentration
- **LD** = Lethal Dose
- **TC** = Toxic Concentration
- **TD** = Toxic Dose

**Section 12 - Ecological Information**

**12.1 Toxicty**

- Harmful to aquatic life.

**12.2 Persistence and degradability**

- Material data lacking.

**12.3 Bioaccumulative potential**

- Material data lacking.

**12.4 Mobility in Soil**

- Material data lacking.

**12.5 Results of PBT and vPvB assessment**

- No PBT and vPvB assessment has been conducted.

**12.6 Other adverse effects**

- No studies have been found.

**Section 13 - Disposal Considerations**

**13.1 Waste treatment methods**

<table>
<thead>
<tr>
<th>Product waste</th>
<th>Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging waste</td>
<td>Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.</td>
</tr>
</tbody>
</table>

**Section 14 - Transport Information**
### 14.1 UN number
Not Applicable

### 14.2 UN proper shipping name
Not Regulated

### 14.3 Transport hazard class(es)
Not Applicable

### 14.4 Packing group
Not Applicable

### 14.5 Environmental hazards
NDA

### 14.6 Special precautions for user
- None specified.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Data lacking.

---

#### Section 15 - Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### SARA Hazard Classifications
- None

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>State Right To Know</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>68584-23-6</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt</td>
<td>26264-06-2</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Ethene, homopolymer</td>
<td>9002-88-4</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic</td>
<td>64741-88-4</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>Yes</td>
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#### Inventory

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<th>Component</th>
<th>CAS</th>
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<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>China</th>
<th>EU EINECS</th>
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<tbody>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
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<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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</table>

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#### Inventory (Con't.)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EU ELNICS</th>
<th>Japan ENCS</th>
<th>TSCA</th>
</tr>
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<tbody>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>68584-23-6</td>
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<tr>
<td>Talc</td>
<td>14807-96-6</td>
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</tr>
</tbody>
</table>
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 No No Yes
Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 No Yes Yes
Carbon Black 1333-86-4 Yes Yes Yes
Ethene, homopolymer 9002-88-4 No Yes Yes
Graphite 7782-42-5 No No Yes
Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 No No Yes
Talc 14807-96-6 No Yes Yes

United States - California

Environment
U.S. - California - Proposition 65 - Carcinogens List

• Carbon Black 1333-86-4 No
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
• Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 Not Listed
• Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 Not Listed
• Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Carbon Black 1333-86-4 No
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
• Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 Not Listed
• Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 Not Listed
• Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Carbon Black 1333-86-4 Not Listed
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
• Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 Not Listed
• Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 Not Listed
• Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Carbon Black 1333-86-4 Not Listed
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
• Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 Not Listed
• Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 Not Listed
• Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Carbon Black 1333-86-4 Not Listed
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
• Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6 Not Listed
• Benzenesulfonic acid, dodecyl-, calcium salt 26264-06-2 Not Listed
• Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic 64741-88-4 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Carbon Black 1333-86-4 Not Listed
• Talc 14807-96-6 Not Listed
• Ethene, homopolymer 9002-88-4 Not Listed
• Graphite 7782-42-5 Not Listed
15.2 Chemical Safety Assessment

• No Chemical Safety Assessment has been carried out.

15.3 Other Information

• WARNING: This product contains a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Relevant Phrases (code &amp; full text)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• H302 - Harmful if swallowed</td>
</tr>
<tr>
<td>• H350 - May cause cancer.</td>
</tr>
<tr>
<td>• H351 - Suspected of causing cancer.</td>
</tr>
<tr>
<td>• H372 - Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

Revision Date: 07/April/2017
Last Revision Date: 07/April/2017
Preparation Date: 21/May/2013

Disclaimer/Statement of Liability

• 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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key to abbreviations
NDA = No Data Available