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

1.1 Product identifier

Product Name · All-Star
Synonyms · Anti-Seize; 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, drill collars at maximum torque in severe drilling conditions

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 · Reproductive Toxicity 1A - H360FD
Effects on or via Lactation - H362

2.2 Label Elements

CLP

DANGER

Hazard statements · H360FD - May damage fertility. May damage the unborn child.
H362 - May cause harm to breast-fed children

Precautionary statements
Prevention · P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, vapours and/or spray.
P263 - Avoid contact during pregnancy/while nursing.
P264 - Wash thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response • P308+P313 - IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • P405 - Store locked up.
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is 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
Reproductive Toxicity 1A
Specific Target Organ Toxicity Repeated Exposure 1
Hazardous to the aquatic environment Acute 3
Hazardous to the aquatic environment Chronic 1

2.2 Label elements

UN GHS

DANGER

Hazard statements • Causes mild skin irritation
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life
Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • If skin irritation occurs: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Collect spillage.

Storage/Disposal • Store locked up.
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
- Reproductive Toxicity 1A
  Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements
OSHA HCS 2012

DANGER

Hazard statements • May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements
Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

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

2.3 Other hazards

Canada
According to: WHMIS 2015

2.1 Classification of the substance or mixture
WHMIS 2015 • Reproductive Toxicity 1A
  Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements
WHMIS 2015

DANGER

Hazard statements • May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements
Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

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

2.3 Other hazards
WHMIS 2015 • In Canada, the product mentioned above is 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

<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>
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<tbody>
<tr>
<td>Lead, powder</td>
<td>CAS:7439-92-1 EC Number:231-100-4</td>
<td>55% TO 70%</td>
<td>NDA</td>
<td>EU CLP: Annex VI, Table 3.1: Repr. 1A, H360FD (Oro, Inhl); Lact., H362</td>
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<td></td>
<td></td>
<td>OSHA HCS 2012: Repr. 1A (Oro); STOT RE 1 (CNS, GI / Oro)</td>
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<td></td>
<td>WHMIS 2015: Repr. 1A (Oro); STOT RE 1 (CNS, GI / Oro)</td>
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<tr>
<td>Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic</td>
<td>CAS:64741-88-4 EC Number:265-090-8 EU Index:649-454-00-7</td>
<td>0% TO 38.7%</td>
<td>Ingestion/Oral-Rat LD50 • &gt;5000 mg/kg</td>
<td>EU CLP: Annex VI, Table 3.1: Carc. 1B, H350</td>
<td>NDA</td>
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<td>Skin-Rabbit LD50 • &gt;2000 mg/kg</td>
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<td>UN GHS Revision 4: Skin Irrit. 3; Asp. Tox. 2</td>
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<td>OSHA HCS 2012: Not Classified</td>
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<td></td>
<td></td>
<td>WHMIS 2015: Not Classified</td>
<td></td>
</tr>
<tr>
<td>Talc</td>
<td>CAS:14807-96-6 EC Number:238-877-9</td>
<td>1% TO 10%</td>
<td>NDA</td>
<td>EU CLP: STOT RE 1 (Lungs / Inhl), H372</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>UN GHS Revision 4: Skin Irrit. 3; STOT RE 1 (Lungs / Inhl)</td>
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<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: STOT RE 1 (Lungs / Inhl)</td>
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<td>WHMIS 2015: STOT RE 1 (Lungs / Inhl)</td>
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<tr>
<td>Graphite</td>
<td>CAS:7782-42-5 EC Number:231-955-3</td>
<td>1% TO 10%</td>
<td>NDA</td>
<td>EU CLP: STOT RE 1 (Lungs / Inhl), H372</td>
<td>NDA</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>UN GHS Revision 4: Comb. Dust; STOT RE 1 (Lungs / Inhl)</td>
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<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Comb. Dust; STOT RE 1 (Lungs / Inhl)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WHMIS 2015: Comb. Dust; STOT RE 1 (Lungs / Inhl)</td>
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</tr>
<tr>
<td>Carbon Black</td>
<td>CAS:1333-86-4 EC</td>
<td>1% TO 10%</td>
<td>Ingestion/Oral-Rat LD50 • &gt;15400 mg/kg</td>
<td>EU CLP: Carc. 2, H351; STOT RE 1, H372</td>
<td>NDA</td>
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<td></td>
<td></td>
<td></td>
<td>UN GHS Revision 4: Carc. 2;</td>
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</tr>
</tbody>
</table>
### Calcium moncarbonate

**Number:** 215-609-9  
**CAS:** 471-34-1  
**EC Number:** 207-439-9  
**Skin-Rabbit LD50:** >3 g/kg  
**STOT RE 1 (Lungs, Inhl):** Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust  
**OSHA HCS 2012:** Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust  
**WHMIS 2015:** Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust

### Sulfonic acid, petroleum, calcium salt

**CAS:** 61789-86-4  
**EINECS:** 263-093-9  
**Ingestion/Oral-Rat LD50:** 6450 mg/kg  
**EU CLP:** Skin Irrit. 2, H315; Eye Irrit. 2, H319  
**UN GHS Revision 4:** Skin Irrit. 2; Eye Irrit. 2  
**OSHA HCS 2012:** Skin Irrit. 2; Eye Irrit. 2  
**WHMIS 2015:** Skin Irrit. 2; Eye Irrit. 2

### Benzenesulfonic acid, dodecyl-, calcium salt

**CAS:** 26264-06-2  
**EINECS:** 247-557-8  
**Ingestion/Oral-Rat LD50:** 1300 mg/kg  
**EU CLP:** Acute Tox. 4, H302  
**UN GHS Revision 4:** Acute Tox. 4 (orl); Aquatic Acute 2  
**OSHA HCS 2012:** Acute Tox. 4 (orl)  
**WHMIS 2015:** Acute Tox. 4 (orl)

### Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts

**CAS:** 68584-23-6  
**EINECS:** 271-529-4  
**0% TO 2.15% Ingestion/Oral-Rat LD50:** 6450 mg/kg  
**EU CLP:** Not Classified  
**UN GHS Revision 4:** Not Classified  
**OSHA HCS 2012:** Not Classified  
**WHMIS 2015:** Not Classified

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**  
- Do NOT induce vomiting. 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**

**Notes to Physician**  
- 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**  
- None

**Hazardous Combustion Products**  
- No data available

**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. Do not breathe mist, vapours and/or spray. 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>Calcium monocarbonate (471-34-1)</th>
<th>Carbon Black (1333-86-4)</th>
<th>Talc (14807-96-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>TWAs</td>
<td>TWAs</td>
<td>TWAs</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Not established</td>
<td>3 mg/m3 TWA (inhalable particulate matter)</td>
<td>2 mg/m3 TWA (particulate matter containing no asbestos and &lt;1% crystalline silica, respirable particulate matter)</td>
</tr>
<tr>
<td>Argentina</td>
<td>Not established</td>
<td>3.5 mg/m3 TWA [CMP]</td>
<td>2 mg/m3 TWA [CMP] (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica)</td>
</tr>
<tr>
<td>Australia</td>
<td>10 mg/m3 TWA (containing no asbestos and &lt;1% crystalline silica, inhalable dust)</td>
<td>3 mg/m3 TWA</td>
<td>2.5 mg/m3 TWA [CMP] (containing no asbestos fibers)</td>
</tr>
<tr>
<td>Canada Alberta</td>
<td>10 mg/m3 TWA</td>
<td>3.5 mg/m3 TWA</td>
<td>2 mg/m3 TWA (respirable particulate)</td>
</tr>
<tr>
<td>Canada British Columbia</td>
<td>Not established</td>
<td>3 mg/m3 TWA (inhalable)</td>
<td>2 mg/m3 TWA (particulate matter containing no Asbestos and &lt;1% Crystalline silica, respirable particulate)</td>
</tr>
<tr>
<td>Chemical</td>
<td>TWAs</td>
<td>STELs</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Graphite</strong></td>
<td>2 mg/m³ TWA (all forms except Graphite fibers, respirable particulate matter)</td>
<td>2 mg/m³ STEL (natural, all forms, except Graphite fibers, respirable particulate matter)</td>
<td></td>
</tr>
<tr>
<td><strong>Lead, powder</strong></td>
<td>0.05 mg/m³ TWA (dust and fume)</td>
<td>0.05 mg/m³ STEL</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Result Canada Ontario</th>
<th>Canada Quebec</th>
<th>Canada Saskatchewan</th>
<th>Canada Yukon</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs Not established</td>
<td>10 mg/m³ TWA (total dust)</td>
<td>10 mg/m³ TWA (listed under Limestone)</td>
<td>30 mppcf TWA; 10 mg/m³ TWA</td>
<td>Not established</td>
</tr>
<tr>
<td>STELs Not established</td>
<td>Not established</td>
<td>20 mg/m³ STEL (listed under Limestone)</td>
<td>20 mg/m³ STEL</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>STELs 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 2 mg/m³ TWA (inhalable)</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>STELs Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
<td>Not established</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td><strong>Graphite</strong></td>
<td>STELs Not established</td>
<td>Not established</td>
<td>4 mg/m³ STEL (natural, all forms, except Graphite fibers, respirable particulate matter)</td>
<td>Not established</td>
<td>4 mg/m³ STEL (natural, all forms, except Graphite fibers, respirable particulate matter)</td>
</tr>
<tr>
<td><strong>Lead, powder</strong></td>
<td>TWAs 0.05 mg/m³ TWA</td>
<td>0.05 mg/m³ TWA</td>
<td>0.05 mg/m³ TWA</td>
<td>0.05 mg/m³ TWA</td>
<td>0.05 mg/m³ TWA</td>
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<tr>
<td>STELs Not established</td>
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<td>0.15 mg/m³ STEL</td>
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<td>0.15 mg/m³ STEL</td>
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<table>
<thead>
<tr>
<th>Chemical</th>
<th>Result</th>
<th>Canada Ontario</th>
<th>Canada Quebec</th>
<th>Canada Saskatchewan</th>
<th>Canada Yukon</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs Not established</td>
<td>10 mg/m³ TWA (total dust)</td>
<td>10 mg/m³ TWA (listed under Limestone)</td>
<td>30 mppcf TWA; 10 mg/m³ TWA</td>
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<td>STELs Not established</td>
<td>Not established</td>
<td>20 mg/m³ STEL (listed under Limestone)</td>
<td>20 mg/m³ STEL</td>
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<tr>
<td>Carbon Black (1333-86-4)</td>
<td>STELs Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
<td>8 mg/m³ STEL (total dust)</td>
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<tr>
<td>Talc (14807-96-6)</td>
<td>STELs Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td></td>
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<tr>
<td>TWA 2 mg/m³ TWA (containing no Asbestos and &lt;1% Crystalline silica, respirable)</td>
<td>3 mg/m³ TWA (respirable fraction)</td>
<td>20 mppcf TWA</td>
<td>3 mg/m³ TWA (free SiO2 &lt;10%, total dust)</td>
<td></td>
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<tr>
<td>STELs Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>6 mg/m³ STEL (free SiO2 &lt;10%, total dust); 2 mg/m³ STEL (free SiO2 &lt;10%, respirable dust)</td>
<td></td>
<td></td>
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</table>

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

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Result</th>
<th>Canada Ontario</th>
<th>Canada Quebec</th>
<th>Canada Saskatchewan</th>
<th>Canada Yukon</th>
<th>China</th>
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<tbody>
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<td>Carbon Black (1333-86-4)</td>
<td>STELs Not established</td>
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<td>7 mg/m³ STEL</td>
<td>8 mg/m³ STEL (total dust)</td>
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<td>Talc (14807-96-6)</td>
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<tr>
<td>TWA 2 mg/m³ TWA (containing no Asbestos and &lt;1% Crystalline silica, respirable)</td>
<td>3 mg/m³ TWA (respirable fraction)</td>
<td>20 mppcf TWA</td>
<td>3 mg/m³ TWA (free SiO2 &lt;10%, total dust)</td>
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<tr>
<td>STELs Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>6 mg/m³ STEL (free SiO2 &lt;10%, total dust); 2 mg/m³ STEL (free SiO2 &lt;10%, respirable dust)</td>
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<td>Germany DFG</td>
<td>Germany TRGS</td>
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<tr>
<td>Graphite</td>
<td>Not established</td>
<td>2 mg/m3 TWA (except Graphite fibres, respirable)</td>
<td>STELs Not established</td>
<td>Not established</td>
<td>4 mg/m3 STEL (natural, except Graphite fibres, respirable fraction)</td>
<td>Not established</td>
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<tr>
<td></td>
<td>2 mg/m3 TWA (except Graphite fibres, respirable)</td>
<td>2 mg/m3 TWA (containing no Asbestos and &lt;1% Crystalline silica, except Graphite fibres, respirable dust)</td>
<td>TWAs Not established</td>
<td>0.15 mg/m3 STEL (dust and fume)</td>
<td>0.45 mg/m3 STEL (dust and fume)</td>
<td>0.15 mg/m3 STEL (dust); 0.09 mg/m3 STEL (fume)</td>
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<td>Lead, powder (7439-92-1)</td>
<td>STELs Not established</td>
<td>0.05 mg/m3 TWA (designated substances regulation); 0.05 mg/m3 TWA (applies to workplaces to which the designated substances regulation does not apply)</td>
<td>TWAs Not established</td>
<td>3.5 mg/m3 TWA [VME]</td>
<td>3.5 mg/m3 TWA (inhalable fraction)</td>
<td>3.5 mg/m3 TWA</td>
</tr>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs Not established</td>
<td>10 mg/m3 TWA [VME]</td>
<td>Calcium monocarbonate (471-34-1)</td>
<td>Not established</td>
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<tr>
<td>Sulfonic acid, petroleum, calcium salt (61789-86-4)</td>
<td>TWAs Not established</td>
<td>Not established</td>
<td>Sulfonic acid, petroleum, calcium salt (61789-86-4)</td>
<td>Not established</td>
<td>5 mg/m3 TWA AGW (respirable fraction, exposure factor 4)</td>
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<td>Talc (14807-96-6)</td>
<td>TWAs Not established</td>
<td>Not established</td>
<td>Talc (14807-96-6)</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
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<tr>
<td>Graphite (7782-42-5)</td>
<td>TWAs Not established</td>
<td>2 mg/m3 TWA [VME] (alveolar fraction)</td>
<td>Graphite (7782-42-5)</td>
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<td>Not established</td>
<td>Not established</td>
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<tr>
<td>MAKS Not established</td>
<td>Not established</td>
<td>1.5 mg/m3 TWA MAK (respirable fraction); 4 mg/m3 TWA MAK (inhaalable fraction)</td>
<td>Lead, powder (7439-92-1)</td>
<td>Not established</td>
<td>Not established</td>
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<td>TWAs Not established</td>
<td>0.1 mg/m3 TWA [VME] (restrictive limit)</td>
<td>Not established</td>
<td>Lead, powder (7439-92-1)</td>
<td>Not established</td>
<td>Not established</td>
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<tr>
<td>Ceilings Not established</td>
<td>0.05 mg/m3 Ceiling (dust); 0.03 mg/m3 Ceiling (fume)</td>
<td>Not established</td>
<td>Talc (14807-96-6)</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
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<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs Not established</td>
<td>3.5 mg/m3 TWA [VME]</td>
<td>Carbon Black (1333-86-4)</td>
<td>Not established</td>
<td>Not established</td>
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Exposure Limits/Guidelines (Con’t.)

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<thead>
<tr>
<th>Result</th>
<th>Israel</th>
<th>Italy</th>
<th>Japan</th>
<th>Malaysia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</td>
<td>3 mg/m3 TWA (inhalable fraction)</td>
<td>Not established</td>
<td>4 mg/m3 OEL (Class 2 Dust, total dust); 1 mg/m3 OEL (Class 2 Dust, respirable dust)</td>
<td>3.5 mg/m3 TWA</td>
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<tr>
<td>Result</td>
<td>Netherlands</td>
<td>NIOSH</td>
<td>OSHA</td>
<td>OSHA Vacated</td>
<td>Portugal</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
<td>------------------------------</td>
<td>---------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs</td>
<td>Not established</td>
<td>10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable dust)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</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>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>0.25 mg/m³ TWA</td>
<td>2 mg/m³ TWA (containing no Asbestos and &lt;1% Quartz, respirable dust)</td>
<td>Not established</td>
<td>2 mg/m³ TWA (&lt;1% Crystalline silica, containing no Asbestos, respirable dust)</td>
</tr>
<tr>
<td>Graphite</td>
<td>TWAs</td>
<td>Not established</td>
<td>2.5 mg/m³ TWA (natural, respirable dust)</td>
<td>15 mg/m³ TWA (synthetic, total dust); 5 mg/m³ TWA (synthetic, respirable fraction)</td>
<td>2.5 mg/m³ TWA (natural, respirable dust); 10 mg/m³ TWA (synthetic, total dust); 5 mg/m³ TWA (synthetic, respirable fraction)</td>
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<td>Lead, powder (7439-92-1)</td>
<td>TWAs</td>
<td>0.15 mg/m³ TWA</td>
<td>0.050 mg/m³ TWA</td>
<td>50 µg/m³ TWA</td>
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**Exposure Limits/Guidelines (Con't.)**

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<tr>
<th>Result</th>
<th>Russia</th>
<th>Singapore</th>
<th>Thailand</th>
<th>United Kingdom</th>
<th>United States - California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>5 mg/m³ PEL (respirable fraction, listed under Particulates not otherwise regulated); 10 mg/m³ PEL (total dust, listed under Particulates not otherwise regulated)</td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs</td>
<td>Not established</td>
<td>3.5 mg/m³ PEL</td>
<td>Not established</td>
<td>3.5 mg/m³ TWA</td>
</tr>
<tr>
<td></td>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>7 mg/m³ STEL</td>
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<td>Talc (14807-96-6)</td>
<td>TWAs</td>
<td>Not established</td>
<td>2 mg/m³ PEL</td>
<td>Not established</td>
<td>1 mg/m³ TWA (respirable dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 mg/m³ PEL (respirable dust, containing no Asbestos and &lt;1% Quartz)</td>
</tr>
</tbody>
</table>
### Exposure Limits/Guidelines (Con’t.)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Result</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium monocarbonate (471-34-1)</td>
<td>TWAs 10 mg/m3 TWA [VTRE-L-8/40</td>
<td>Venezuela</td>
</tr>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>TWAs 3.5 mg/m3 TWA [VTRE-L-8/40</td>
<td></td>
</tr>
<tr>
<td>Talc (14807-96-6)</td>
<td>TWAs 2 mg/m3 TWA [VTRE-L-8/40 (respirable fraction; particulate containing no Asbestos and &lt;1% Crystalline silica)</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>TWAs 2 mg/m3 TWA [VTRE-L-8/40 (dust)</td>
<td></td>
</tr>
<tr>
<td>Lead, powder (7439-92-1)</td>
<td>TWAs 0.05 ppm TWA [VTRE-L-8/40 (protection of the health and safety of workers from risks related to this chemical agent at work)</td>
<td></td>
</tr>
</tbody>
</table>

### Exposure Control Notations

**Japan**
- Lead, powder (7439-92-1): **Carcinogens**: (Group 2B - Possibly Carcinogenic to Humans)
- Carbon Black (1333-86-4): **Carcinogens**: (Group 2B - Possibly Carcinogenic to Humans)

**Mexico**
- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Confirmed animal carcinogen)
- 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 Dues**: (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))
- **Lead, powder (7439-92-1)**: **Carcinogens**: (Animal Carcinogen)
- Calcium monocarbonate (471-34-1): **Nuisance Dues**: (10 mg/m3 TWA (containing <1% Quartz, total dust); 30 mppcf TWA (containing <1% Quartz, total dust); 3 mg/m3 TWA (containing <1% Quartz, inhalable dust))

**Portugal**
- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- 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**
- Lead, powder (7439-92-1): **Carcinogens**: (A3 - confirmed animal carcinogen)
- 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**
- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Confirmed animal carcinogen with unknown relevance to humans)
- Talc (14807-96-6): **Carcinogens**: (A1 - Confirmed human carcinogen)
- Carbon Black (1333-86-4): **Carcinogens**: (A4 - Not classifiable as a human carcinogen)

**Canada Alberta**
- Lead, powder (7439-92-1): **Designated Substances**: (Designated substance - requires code of practice)

**Canada British Columbia**
- Lead, powder (7439-92-1): **Carcinogens**: (IARC Category 2B - Possible Human Carcinogen) | **Designated Substances**: (IARC Category 2B - Possible Human Carcinogen; Adverse reproductive effect) | **Substances with Reproductive Critical Effects**: (Adverse reproductive effect)
• Carbon Black (1333-86-4): **Carcinogens**: (IARC Category 2B - Possible Human Carcinogen) | **Designated Substances**: (IARC Category 2B - Possible Human Carcinogen)

Canada Manitoba

- Lead, powder (7439-92-1): **Carcinogens**: (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- 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

- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Animal Carcinogen)
- 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)

Canada Nova Scotia

- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- 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 Ontario

- Lead, powder (7439-92-1): **Designated Substances**: (0.05 mg/m3 TWA)

Canada Quebec

- Lead, powder (7439-92-1): **Carcinogens**: (C3 carcinogen - effect detected in animals)

Canada Saskatchewan

- Lead, powder (7439-92-1): **Designated Substances**: (Present)

France

- Lead, powder (7439-92-1): **Carcinogens**: (Carcinogen categories 1A, 1B, 2) | **Reproductive Toxins**: (Reproductive Toxin categories 1A, 1B, 2)

Venezuela

- Lead, powder (7439-92-1): **Ceilings**: (Present)
- Talc (14807-96-6): **Ceilings**: (Present)
- Carbon Black (1333-86-4): **Ceilings**: (Present)

ACGIH

- Lead, powder (7439-92-1): **Carcinogens**: (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- 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)

Germany TRGS

- Lead, powder (7439-92-1): **Developmental Toxins**: (Category 1A (bioavailable, metal)) | **Reproductive Toxins**: (Category 2 (bioavailable; metal))

Germany DFG

- Graphite (7782-42-5): **Pregnancy**: (no risk to embryo/fetus if exposure limits adhered to (inhaled fraction; respirable fraction))
- Lead, powder (7439-92-1): **Carcinogens**: (Category 2 (considered to be carcinogenic for man))
- Talc (14807-96-6): **Carcinogens**: (Category 3B (could be carcinogenic for man; free of asbestos fibers))
- Carbon Black (1333-86-4): **Carcinogens**: (Category 3B (could be carcinogenic for man; inhalable fraction))
- Sulfonic acid, petroleum, calcium salt (61789-92-6): **Pregnancy**: (classification not yet possible (respirable fraction))

**Exposure Limits Supplemental**

Thailand

- Graphite (7782-42-5): **Mineral Dusts**: (15 mppcf TWA)
- Graphite as Particulates not otherwise classified (PNOC): **Mineral Dusts**: (15 mppcf TWA (respirable dust); 15 mg/m3 TWA (total dust); 50 mppcf TWA (total dust); 5 mg/m3 TWA (respirable dust))
- Talc (14807-96-6): **Mineral Dusts**: (20 mppcf TWA)

Argentina

- Lead, powder (7439-92-1): **BEIs**: (30 µg/100 mL blood not critical Pb (Women of child bearing potential, whose blood Pb level exceeds 10 mg/dL, are at risk of delivering a child with blood Pb level over the current CDC guideline. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficiencies. The blood Pb of these children should be closely monitored and appropriate steps be taken to minimize the child's exposure to environmental lead.))

Canada Yukon

- Lead, powder (7439-92-1): **Maximum Acceptable Body Burdens**: (80 µg/100 mL Medium: blood; 200 µg/L Medium: urine)

Israel

- Lead, powder (7439-92-1): **Action Levels**: (0.025 mg/m3 AL (as Pb)) | **Biological Markers of Occupational Exposure**: (30 µg/100 mL Medium: blood Parameter: Lead (Women age 45 and over and all men); 30 µg/100 mL Medium: blood Parameter: Lead (Women under age 45))
- Carbon Black (1333-86-4): **Action Levels**: (1.50 mg/m3 AL) | **Substances Requiring Environmental - Occu**: (Present)

Venezuela

- Lead, powder (7439-92-1): **Biological Exposure Indices**: (30 µg/100 mL blood not critical Lead (Note: Women of reproductive age, whose levels of blood Pb exceed 10 µg/dL, are at risk of giving birth to children with Pb blood values exceeding said level, which was established by the Center of Disease Control in the United States. If Pb levels in said children remain elevated, they may be at an increased risk of cognitive deficits. The Pb in the blood of those children must be watched very closely and the children must be kept from being exposed to environmental lead.))

OSHA

- Graphite (7782-42-5): **Mineral Dusts**: (15 mppcf TWA (natural))
- Graphite as Particulates not otherwise classified (PNOC): **Mineral Dusts**: (15 mppcf TWA (respirable fraction); 5 mg/m3 TWA (respirable fraction); 50 mppcf TWA (total dust); 15 mg/m3 TWA (total dust))
- Talc (14807-96-6): **Mineral Dusts**: (20 mppcf TWA (if 1% Quartz or more; use Quartz limit))
ACGIH
• Graphite (7782-42-5): TLV Basis - Critical Effects: (pneumoconiosis (all forms except graphite fibers))

• Lead, powder (7439-92-1): BEIs: (30 µg/100 mL: Medium: blood Time: not critical Parameter: Lead (Note: Women of child bearing potential, whose blood Pb exceeds 10 µg/dL, are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 µg/dL. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficits. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.)) | TLV Basis - Critical Effects: (CNS and PNS impairment; hematologic effects) | Notice of Intended Changes (BEIs): (200 µg/L: Medium: blood Time: not critical Parameter: lead)

• Talc (14807-96-6): TLV Basis - Critical Effects: (pulmonary fibrosis (containing no asbestos fibers); pulmonary function (containing no asbestos fibers))

• Carbon Black (1333-86-4): TLV Basis - Critical Effects: (bronchitis)

Germany TRGS
• Lead, powder (7439-92-1): BELs: (300 µg/L: Medium: whole blood Time: no restriction Parameter: lead) (women age below 45 years); 400 µg/L Medium: whole blood Time: no restriction Parameter: Lead (women 45 years and older))

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
• Wear appropriate gloves. 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

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Color</th>
<th>Odor Threshold</th>
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<td>Vapor Pressure</td>
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<td>LEL</td>
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<td>Autoignition</td>
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<td>Flammability (solid, gas)</td>
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<td>Data lacking</td>
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</tr>
<tr>
<td>Environmental</td>
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</tr>
</tbody>
</table>
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

- Strong oxidising agents.

### 10.6 Hazardous decomposition products

- Carbon Monoxide, Carbon Dioxide, Oxides of Lead.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

| Components | Acute Toxicity: Ingestion/Oro-Oral - Woman TDLo • 450 mg/kg 6 Year(s); Peripheral Nerve and Sensation: Flaccid paralysis without anesthesia (usually neuromuscular blockage); Behavioral: Hallucinations, distorted perceptions; Behavioral: Muscle weakness; Inhalation-Human TCLo • 10 µg/m³; Gastrointestinal: Gastritis; Liver: Other changes; Multi-dose Toxicity: Ingestion/Oral-TDLo • 43.75 mg/kg 1 Week(s)-Continuous; Blood: Other changes; Kidney, Ureters, and Bladder: Other changes in urine composition; Biochemical-Metabolism (intermediary): Porphyrin, including bile pigments; Inhalation-Human TCLo • 0.011 mg/m³ 26 Week(s)-Intermittent; Brain and Coverings: Other degenerative changes; Inhalation-Man TCLo • 0.03 mg/m³ 5 Year(s)-Intermittent; Endocrine: Androgenic; Inhalation-Man TCLo • 0.109 mg/m³ 5 Year(s)-Intermittent; Reproductive Effects: Paternal Effects: Spermatogenesis; Mutagen: Cytogenetic analysis; Inhalation-Rat • 23 µg/m³ 16 Week(s); Reproductive: Ingestion/Oro-Oral-TDLo • 790 mg/kg (multigenerations); Reproductive Effects: Effects on Embryo or Fetus: Fetal toxicity (except death, e.g., stunted fetus); Reproductive Effects: Effects on Embryo or Fetus: Fetal death; Inhalation-Rat TCLo • 10 mg/m³ 24 Hour(s); Intermittent; Reproductive Effects: Effects on Embryo or Fetus: Fetal toxicity (except death, e.g., stunted fetus); Reproductive Effects: Specific Developmental Abnormalities: Blood and lymphatic system

| Components | Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent; Mild irritation; Tumorigen / Carcinogen: Inhalation-Rat • 11 mg/m³ 1 Year(s)-Intermittent; Tumorigen: Equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: Tumors; Inhalation-Rat TCLo • 18 mg/m³ 6 Hour(s) 2 Year(s)-Intermittent; Tumorigen: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Bronchiogenic carcinoma; Endocrine: Tumors

| Components | Acute Toxicity: Ingestion/Oro-Oral - LD50 • >15400 mg/kg; Behavioral: Somnolence (general depressed activity); Skin-Rabbit LD50 • >3 g/kg; Mutagen: DNA adduct • Inhalation-Mouse • 6200 µg/m³ 16 Hour(s) 12 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 µg/L 13 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 µg/L 13 Week(s); Tumorigen / Carcinogen: Inhalation-Rat TCLo • 11600 µg/m³ 18 Hour(s) 2 Year(s)-Intermittent; Tumorigen: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Tumors

| Components | Acute Toxicity: Ingestion/Oro-Oral - LD50 • 6450 mg/kg; Irritation: Eye-Rabbit • 750 µg 24 Hour(s); Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s); Moderate irritation; Multi-dose Toxicity: Ingestion/Oro-Woman TDLo • 4.08 g/kg 30 Day(s)-Intermittent; Vascular: BP elevation not characterized in autonomic section; Gastrointestinal: Changes in structure or function
of endocrine pancreas; Biochemical: Metabolism (intermediary); Effect on inflammation or mediation of inflammation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Acute Toxicity</th>
<th>GHS Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt (0% TO 2.15%)</td>
<td>Ingestion/Oral-Rat LD50 • 1300 mg/kg</td>
<td>EU/CLP•Data lacking</td>
</tr>
<tr>
<td>Sulfonic acid, petroleum, calcium salt (0% TO 2.15%)</td>
<td>Ingestion/Oral-Rat LD50 • &gt;5 g/kg; Gastrointestinal Hypermotility, diarrhea; Skin-Rabbit LD50 • &gt;5 g/kg</td>
<td>EU/CLP•Data lacking</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>EU/CLP•Data lacking</th>
<th>UN GHS 4•Data lacking</th>
<th>OSHA HCS 2012•Data lacking</th>
<th>WHMIS 2015•Data lacking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/Irritation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/Irritation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicity for Reproduction</td>
<td>EU/CLP•Effects on or via lactation; Toxic to Reproduction 1A</td>
<td>UN GHS 4•Toxic to Reproduction 1A</td>
<td>OSHA HCS 2012•Toxic to Reproduction 1A</td>
<td>WHMIS 2015•Toxic to Reproduction 1A</td>
</tr>
<tr>
<td>STOT-SE</td>
<td>EU/CLP•Data lacking</td>
<td>UN GHS 4•Data lacking</td>
<td>OSHA HCS 2012•Data lacking</td>
<td>WHMIS 2015•Data lacking</td>
</tr>
<tr>
<td>STOT-RE</td>
<td>EU/CLP•Data lacking</td>
<td>UN GHS 4•Specific Target Organ Toxicity Repeated Exposure 1</td>
<td>OSHA HCS 2012•Specific Target Organ Toxicity Repeated Exposure 1</td>
<td>WHMIS 2015•Specific Target Organ Toxicity Repeated Exposure 1</td>
</tr>
</tbody>
</table>
Potential Health Effects

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

Skin
Acute (Immediate) • Causes mild skin irritation.
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) • No data available
Chronic (Delayed) • No data available

Other
Chronic (Delayed) • Repeated and prolonged exposure to lead may cause effects on the gastrointestinal tract and central nervous system.

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>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>Group 2B-Possible Carcinogen</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Lead, powder</td>
<td>7439-92-1</td>
<td>Group 2A-Probable Carcinogen</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
</tbody>
</table>

Reproductive Effects • Repeated and prolonged exposure may cause reproductive effects. May cause harm to breast-fed children.

Key to abbreviations
LC = Lethal Concentration
LD = Lethal Dose
TC = Toxic Concentration
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead, powder (55% TO 70%)</td>
</tr>
<tr>
<td>7439-92-1</td>
</tr>
</tbody>
</table>
| **Aquatic Toxicity-Fish:** 96 Hour(s) LC50 *Cyprinus carpio* (Common Carp) 0.4 mg/L Comments: Acute Toxicity of Heavy Metals to Common Carp (Cyprinus carpio) 28 Day(s) NOEC *Cyprinus carpio* (Common Carp) 0.00003 mg/L Comments: Bioaccumulation of Micropollutants and Biomarker Responses in Caged Carp (Cyprinus carpio) **Aquatic Toxicity-Crustacea:** 28 Day(s) NOEC *Hyalella azteca* (Scud) 0.006 mg/L Comments: Acute and Chronic Toxicity of Lead in Water and Diet to the Amphipod Hyalella azteca **Aquatic Toxicity-Algae and Other Aquatic Plant(s):** 72 Hour(s) EC50 *Chaetoceros sp.* (Diatom) 0.105 mg/L Comments: Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae

• Harmful to aquatic life. Very toxic to aquatic life with long lasting effects.

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
Product waste  • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Packaging waste  • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT UN3077</td>
<td>Environmentally hazardous substance, solid, n.o.s. (Lead)</td>
<td>9</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>TDG UN3077</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead)</td>
<td>9</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>IMO/IMDG UN3077</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead)</td>
<td>9</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>IATA/ICAO UN3077</td>
<td>Environmentally hazardous substance, solid, n.o.s. (Lead)</td>
<td>9</td>
<td>III</td>
<td>NDA</td>
</tr>
</tbody>
</table>

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>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>68584-23-6</td>
<td>No</td>
</tr>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt</td>
<td>26264-06-2</td>
<td>Yes</td>
</tr>
<tr>
<td>Calcium monocarbonate</td>
<td>471-34-1</td>
<td>No</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>Yes</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead, powder</td>
<td>7439-92-1</td>
<td>Yes</td>
</tr>
<tr>
<td>Mineral oil, petroleum distillates, solvent-</td>
<td>64741-88-4</td>
<td>No</td>
</tr>
<tr>
<td>Component</td>
<td>CAS</td>
<td>Australia AICS</td>
</tr>
<tr>
<td>-----------</td>
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</tr>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>68584-23-6</td>
<td>Yes</td>
</tr>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt</td>
<td>26264-06-2</td>
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<tr>
<td>Calcium monocarbonate</td>
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</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead, powder</td>
<td>7439-92-1</td>
<td>Yes</td>
</tr>
<tr>
<td>Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic</td>
<td>64741-88-4</td>
<td>Yes</td>
</tr>
<tr>
<td>Sulfonic acid, petroleum, calcium salt</td>
<td>61789-86-4</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Inventory (Con’t.)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EU ELNICS</th>
<th>Japan ENCS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts</td>
<td>68584-23-6</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Benzenesulfonic acid, dodecyl-, calcium salt</td>
<td>26264-06-2</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Calcium monocarbonate</td>
<td>471-34-1</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead, powder</td>
<td>7439-92-1</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic</td>
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<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Sulfonic acid, petroleum, calcium salt</td>
<td>61789-86-4</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**United States - California**

**Environment**

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

- Sulfonic acid, petroleum, calcium salt 61789-86-4 Not Listed
carcinogen, 2/21/2003
- Carbon Black 1333-86-4 (airborne, unbound particles of respirable size)
- Lead, powder 7439-92-1 carcigen, 10/1/1992
- Talc 14807-96-6 Not Listed
- Calcium monocarbonate 471-34-1 Not Listed
- Graphite 7782-42-5 Not Listed
15.2 Chemical Safety Assessment

**WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

15.3 Other Information

**WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
Section 16 - Other Information

Relevant Phrases (code & full text)

• H302 - Harmful if swallowed
  H315 - Causes skin irritation
  H319 - Causes serious eye irritation
  H350 - May cause cancer.
  H351 - Suspected of causing cancer.
  H372 - Causes damage to organs through prolonged or repeated exposure.

Revision Date • 18/April/2018
Last Revision Date • 26/June/2017
Preparation Date • 26/June/2017

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