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

1.1 Product identifier
Product Name • NL Collar
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, and Sealant for tool joints and drill collars

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 • Hazardous to the aquatic environment Acute 1 - H400
Hazardous to the aquatic environment Chronic 1 - H410

2.2 Label Elements
CLP

WARNING

Hazard statements • H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements
Prevention • P273 - Avoid release to the environment.
Response • P391 - Collect spillage.
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
  Carcinogenicity 2
  Hazardous to the aquatic environment Acute 1
  Hazardous to the aquatic environment Chronic 1

2.2 Label elements

UN GHS

WARNING

Hazard statements • Causes mild skin irritation
  Suspected of causing cancer.
  Very toxic 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.
  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.
  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 • Carcinogenicity 2

2.2 Label elements

OSHA HCS 2012
WARNING

Hazard statements • Suspected of causing cancer.

Precautionary statements
Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF exposed or concerned: Get medical advice/attention.

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 • Carcinogenicity 2

2.2 Label elements
WHMIS 2015

DANGER

Hazard statements • Suspected of causing cancer.

Precautionary statements
Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF exposed or concerned: Get medical advice/attention.

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
### 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>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica</td>
<td>CAS:14808-60-7 EC Number:238-878-4</td>
<td>40%</td>
<td>NDA</td>
<td>EU CLP: Carc. 1A, H350i; STOT RE 1 (Lungs/Inhli), H372</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UN GHS Revision 4: Carc. 1A; STOT RE 1 (Lungs/Inhli)</td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Carc. 1A; STOT RE 1 (Lungs/Inhli)</td>
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<td></td>
<td></td>
<td>WHMIS 2015: Carc. 1A; STOT RE 1 (Lungs/Inhli)</td>
<td></td>
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<tr>
<td>Zinc powder, stabilized</td>
<td>CAS:7440-66-6 EC Number:231-175-3</td>
<td>10% TO 25%</td>
<td>NDA</td>
<td>EU CLP: Annex VI, Table 3.1: Aquatic Acute 1, H400; Aquatic Chronic 1, H410</td>
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<tr>
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<td></td>
<td>UN GHS Revision 4: Skin Irrit. 3; Aquatic Acute 1; Aquatic Chronic 1</td>
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<td></td>
<td>OSHA HCS 2012: Comb. Dust; Hazard Not Otherwise Classified - Health Hazard - Metal fume fever</td>
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<td></td>
<td>WHMIS 2015: Comb. Dust; Hazard Not Otherwise Classified - Health Hazard - Metal fume fever</td>
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<tr>
<td>Graphite</td>
<td>CAS:7782-42-5 EC Number:231-955-3</td>
<td>15% TO 25%</td>
<td>NDA</td>
<td>EU CLP: STOT RE 1 (Lungs / Inhli), H372</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UN GHS Revision 4: STOT RE 1 (Lungs / Inhli)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Comb. Dust; STOT RE 1 (Lungs / Inhli)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WHMIS 2015: Comb. Dust; STOT RE 1 (Lungs / Inhli)</td>
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<tr>
<td>Copper oxide</td>
<td>CAS:1317-38-0 EU Index:029-016-00-6 EINECS:215-269-1</td>
<td>5% TO 10%</td>
<td>Ingestion/Oral-Rat LD50 • 470 mg/kg</td>
<td>EU CLP: Annex VI, Table 3.1: Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=100)</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>UN GHS Revision 4: Acute Tox. 4 (Orl); Aquatic Acute 1 (M=10); Aquatic Chronic 1 (M=1)</td>
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<tr>
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<td></td>
<td></td>
<td>OSHA HCS 2012: Acute Tox. 4 (Orl); Hazard Not Otherwise Classified - Health Hazard - Metal Fume Fever</td>
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<tr>
<td></td>
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<td></td>
<td>WHMIS 2015: Acute Tox. 4 (Orl); Hazard Not Otherwise Classified - Health Hazard - Metal Fume Fever</td>
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</tr>
<tr>
<td>Asphalt</td>
<td>CAS:8052-42-4 EINECS:232-490-9</td>
<td>2.8%</td>
<td>Ingestion/Oral-Rat LD50 • &gt;5000 mg/kg Skin-Rabbit LD50 • 2000 mg/kg</td>
<td>EU CLP: Carc. 2 (Dermal), H351</td>
<td>NDA</td>
</tr>
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<td></td>
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<td>UN GHS Revision 4: Carc. 2 (Dermal)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Carc. 2 (Dermal)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WHMIS 2015: Carc. 2 (Dermal)</td>
<td></td>
</tr>
<tr>
<td>Zinc O,O-bis(mixed isobutyl and pentyl) phosphorodithioate</td>
<td>CAS:68457-79-4 EINECS:270-608-0</td>
<td>0.714%</td>
<td>NDA</td>
<td>EU CLP: Not Classified</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UN GHS Revision 4: Acute Tox. 5 (Orl)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Not Classified</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>WHMIS 2015: Not Classified</td>
<td></td>
</tr>
</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. Get medical attention if symptoms occur.
Eye • In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. Get medical attention if symptoms occur.

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
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 • In case of fire use media as appropriate for surrounding fire.
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 • Carefully shovel or sweep up spilled material and place in suitable container.

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. 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.
## 8.1 Control parameters

### Exposure Limits/Guidelines

<table>
<thead>
<tr>
<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>Asphalt (8052-42-4)</td>
<td>0.5 mg/m³ TWA (fume, inhalable particulate matter, as benzene-soluble aerosol)</td>
<td>0.5 mg/m³ TWA [CMP] (Bitumen, inhalable fraction, as soluble aerosol in benzene)</td>
<td>5 mg/m³ TWA (fume)</td>
<td>5 mg/m³ TWA (Petroleum; Bitumen, fume)</td>
<td>0.5 mg/m³ TWA (inhalable fume, as Benzene-soluble aerosol)</td>
</tr>
<tr>
<td>Copper oxide</td>
<td>1 mg/m³ TWA (dust and mist, as Cu) as Copper compounds</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Graphite</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 fibers; 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>Crystalline silica (14808-60-7)</td>
<td>0.025 mg/m³ TWA (respirable particulate matter)</td>
<td>0.05 mg/m³ TWA [CMP] (respirable fraction)</td>
<td>0.1 mg/m³ TWA (respirable dust)</td>
<td>0.025 mg/m³ TWA (respirable particulate)</td>
<td>0.025 mg/m³ TWA (respirable)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Result</th>
<th>Canada Manitoba</th>
<th>Canada New Brunswick</th>
<th>Canada Northwest Territories</th>
<th>Canada Nova Scotia</th>
<th>Canada Nunavut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>0.5 mg/m³ TWA (fume, inhalable particulate matter, as Benzene soluble aerosol)</td>
<td>5 mg/m³ TWA (petroleum fumes)</td>
<td>0.5 mg/m³ TWA (Bitumen, fume, as Benzene soluble aerosol (inhalable fraction))</td>
<td>0.5 mg/m³ TWA (fume, as Benzene soluble aerosol (inhalable fraction))</td>
<td>0.5 mg/m³ TWA (Bitumen, fume, as Benzene soluble aerosol (inhalable fraction))</td>
</tr>
<tr>
<td>Copper oxide</td>
<td>1 mg/m³ TWA (dust and mist, as Cu) as Copper compounds</td>
<td>Not established</td>
<td>Not established</td>
<td>1.5 mg/m³ STEL (Bitumen, fume, as Benzene soluble aerosol (inhalable fraction))</td>
<td>Not established</td>
</tr>
<tr>
<td>Graphite</td>
<td>2 mg/m³ TWA (all forms except graphite fibers, respirable particulate matter)</td>
<td>2 mg/m³ TWA (all forms except Graphite fibres, respirable fraction)</td>
<td>2 mg/m³ TWA (natural, all forms except Graphite fibres, respirable)</td>
<td>2 mg/m³ TWA (natural, all forms except Graphite fibres, respirable)</td>
<td>2 mg/m³ TWA (natural, all forms except Graphite fibres, respirable)</td>
</tr>
<tr>
<td>Crystalline silica (14808-60-7)</td>
<td>0.025 mg/m³ TWA (respirable particulate matter)</td>
<td>0.1 mg/m³ TWA (respirable fraction)</td>
<td>0.05 mg/m³ TWA (respirable fraction, listed under Silica - crystalline)</td>
<td>0.025 mg/m³ TWA (respirable particulate matter)</td>
<td>0.05 mg/m³ TWA (respirable fraction, listed under Silica - crystalline)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<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>Asphalt (8052-42-4)</td>
<td>STELs</td>
<td>Not established</td>
<td>1.5 mg/m³ STEL (fume and inhalable fraction, as Benzene soluble aerosol)</td>
<td>10 mg/m³ STEL (fume)</td>
<td>12.5 mg/m³ STEL (fume, as Benzene soluble aerosol)</td>
</tr>
</tbody>
</table>
### Graphite (14808-60-7)

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines (Con’t.)</th>
<th>Result</th>
<th>France</th>
<th>Germany DFG</th>
<th>India</th>
<th>Indonesia</th>
<th>Israel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asphalt</strong> (8052-42-4)</td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>0.5 mg/m³ TWA (soluble aerosol, fume)</td>
<td>0.5 mg/m³ TWA (fume, inhalable fraction, as benzene soluble aerosol)</td>
</tr>
<tr>
<td><strong>Copper oxide</strong></td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>1 mg/m³ TWA (dust and mist, as Cu) as Copper compounds</td>
</tr>
<tr>
<td><strong>Zinc powder, stabilized</strong> (7440-66-6)</td>
<td>Ceilings</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**TWAs**
- 0.5 mg/m³ TWA (fume, inhalable, as Benzene-soluble aerosol)
- 5 mg/m³ TWAEV (fume)
- 0.5 mg/m³ TWA (fume and inhalable fraction, as Benzene soluble aerosol)
- 5 mg/m³ TWA (fume, as Benzene soluble matter)

**STELs**
- Not established

**TWAs (except Graphite fibres, respirable)**
- 2 mg/m³ TWA (natural, except Graphite fibres, respirable dust)
- 2 mg/m³ TWAEV (containing no Asbestos and <1% Crystalline silica, except Graphite fibres, respirable fraction)

**STELs**
- Not established

**Crystalline silica**

**TWAs**
- 0.10 mg/m³ TWA (designated substances regulation, respirable, listed under Silica, crystalline)
- 0.1 mg/m³ TWAEV (respirable fraction, listed under Silica - Quartz, crystalline (Trydinite removed))
- 0.05 mg/m³ TWA (respirable fraction, listed under Silica - Quartz, crystalline)
- 300 particle/mL TWA (listed under Silica - Quartz, crystalline)
- 0.7 mg/m³ TWA (containing 50 - 80% free SiO₂, total dust)
- 0.3 mg/m³ TWA (containing 50 - 80% free SiO₂, respirable dust)
- 1 mg/m³ TWA (containing 10 - 50% free SiO₂, total dust)
- 0.7 mg/m³ TWA (containing 10 - 50% free SiO₂, respirable dust)
- 0.5 mg/m³ TWA (containing >80% free SiO₂, total dust)
- 0.2 mg/m³ TWA (containing >80% free SiO₂, respirable dust)
<table>
<thead>
<tr>
<th>Substance</th>
<th>MAKs</th>
<th>TWAs</th>
<th>OELs</th>
<th>MAK (respirable fraction)</th>
<th>2 mg/m3 TWA (inhalable fraction)</th>
<th>Not established</th>
<th>Not established</th>
<th>Not established</th>
<th>Not established</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (7782-42-5)</td>
<td>Not established</td>
<td>2 mg/m3 TWA [VME] (alveolar fraction)</td>
<td>Not established</td>
<td>Not established</td>
<td>2 mg/m3 TWA (respirable fraction, all forms except graphite fibers)</td>
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<td></td>
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<tr>
<td>Crystalline silica (14808-60-7)</td>
<td>Not established</td>
<td>0.1 mg/m3 TWA [VME] (restrictive limit, alveolar fraction)</td>
<td>Not established</td>
<td>(10600)/(%Quartz + 10) mppcm TWA, dust count; (10)/(%Quartz + 2) mg/m3 TWA, respirable dust; (30)/(%Quartz + 3) mg/m3 TWA, total dust</td>
<td>0.1 mg/m3 TWA (respirable particulate)</td>
<td>0.025 mg/m3 TWA (respirable fraction)</td>
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</table>

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

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<thead>
<tr>
<th>Result</th>
<th>Japan</th>
<th>Malaysia</th>
<th>Mexico</th>
<th>Netherlands</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>STELs</td>
<td>Not established</td>
<td>Not established</td>
<td>10 mg/m3 STEL [PPT-CT]</td>
<td>Not established</td>
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<tr>
<td>TWAs</td>
<td>Not established</td>
<td>5 mg/m3 TWA (fume)</td>
<td>5 mg/m3 TWA VLE-PPT</td>
<td>Not established</td>
<td>Not established</td>
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<tr>
<td>Ceilings</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>5 mg/m3 Ceiling (fume, 15 min)</td>
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<tr>
<td>Copper oxide</td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>0.1 mg/m3 TWA (fume, as Cu)</td>
</tr>
<tr>
<td>Graphite (7782-42-5)</td>
<td>TWAs</td>
<td>2 mg/m3 OEL (Class 1 Dust, total dust); 0.5 mg/m3 OEL (Class 1 Dust, respirable dust)</td>
<td>2 mg/m3 TWA (all forms except Graphite fibres, respirable fraction)</td>
<td>2 mg/m3 TWA VLE-PPT (synthetic and natural)</td>
<td>Not established</td>
</tr>
<tr>
<td>Crystalline silica (14808-60-7)</td>
<td>TWAs</td>
<td>0.03 mg/m3 OEL (respirable dust) as Silica, crystalline (general form)</td>
<td>0.1 mg/m3 TWA (respirable fraction)</td>
<td>0.1 mg/m3 TWA VLE-PPT (respirable fraction)</td>
<td>0.075 mg/m3 TWA (respirable dust, listed under Silicium dioxide)</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Result</th>
<th>OSHA</th>
<th>OSHA Vacated</th>
<th>Russia</th>
<th>Portugal</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (8052-42-4)</td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
<td>0.5 mg/m3 TWA [VLE-MP] (fumes, inhalable fraction, as Benzene soluble aerosol)</td>
<td>Not established</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>5 mg/m3 PEL (fume)</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>TWAs</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>
<td>2 mg/m3 TWA [VLE-MP] (all forms except Graphite fibers, respirable fraction)</td>
<td>Not established</td>
</tr>
<tr>
<td>Crystalline silica (14808-60-7)</td>
<td>TWAs</td>
<td>50 µg/m3 TWA (listed under Respirable crystalline silica)</td>
<td>0.1 mg/m3 TWA (respirable dust)</td>
<td>0.025 mg/m3 TWA [VLE-MP] (respirable fraction)</td>
<td>1 mg/m3 TWA (quartz glass, disintegration aerosol, total mass of aerosols, listed under Silicon dioxide amorphous and vitreous); 1 mg/m3 TWA (containing &gt;70% Silicon dioxide)</td>
</tr>
</tbody>
</table>
### Exposure Limits/Guidelines (Cont.)

<table>
<thead>
<tr>
<th>Result</th>
<th>Thailand</th>
<th>United Kingdom</th>
<th>United States - California</th>
<th>Venezuela</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asphalt</strong> (8052-42-4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWAs</td>
<td>0.5 mg/m³ TWA (as Benzene soluble aerosol)</td>
<td>5 mg/m³ TWA (fumes)</td>
<td>5 mg/m³ PEL (fume)</td>
<td>0.5 mg/m³ TWA [VTRE-L-8/40 (fume, as Benzene soluble aerosols)]</td>
</tr>
<tr>
<td>STELs</td>
<td>Not established</td>
<td>10 mg/m³ STEL (fumes)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

| **Graphite** (7782-42-5) |                  |                |                           |                            |
| TWAs            | Not established   | 10 mg/m³ TWA (inhalable dust); 4 mg/m³ TWA (respirable dust) | 2.5 mg/m³ PEL (natural, respirable dust); 10 mg/m³ PEL (synthetic total dust); 5 mg/m³ PEL (synthetic respirable fraction) | 2 mg/m³ TWA [VTRE-L-8/40 (dust)] |
| STELs           | Not established   | 30 mg/m³ STEL (calculated, inhalable dust); 12 mg/m³ STEL (calculated, respirable dust) | Not established | Not established                |

| **Crystalline silica** |                  |                |                           |                            |
| TWAs            | 0.025 mg/m³ TWA (respirable dust) | 0.1 mg/m³ TWA (respirable) as Silica, crystalline (general form) | 0.3 mg/m³ PEL (total dust); 0.1 mg/m³ PEL (respirable dust) | 0.025 mg/m³ TWA [VTRE-L-8/40 (respirable fraction)] |
| STELs           | Not established   | 0.3 mg/m³ STEL (calculated, respirable) as Silica, crystalline (general form) | Not established | Not established                |

### Exposure Control Notations

**Japan**
- Copper oxide as Copper compounds: **Sensitizers**: (Group 2 skin sensitizer (Evaluation does not necessarily apply to all individuals within the group))
- Crystalline silica as Silica, crystalline (general form): **Carcinogens**: (Group 1 - Carcinogenic to Humans)

**Mexico**
- Asphalt (8052-42-4): **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**
- Asphalt (8052-42-4): **Carcinogens**: (A4 - Not Classifiable as a Human Carcinogen (fumes))
- Crystalline silica (14808-60-7): **Carcinogens**: (A2 - Suspected Human Carcinogen)

**Indonesia**
- Asphalt (8052-42-4): **Carcinogens**: (A4 - not classifiable as a human carcinogen)

**Argentina**
- Asphalt (8052-42-4): **Carcinogens**: (A4 - Not classifiable as a human carcinogen (fumes))
- Crystalline silica (14808-60-7): **Carcinogens**: (A2 - Suspected human carcinogen)

**Canada Alberta**
- Crystalline silica as Silica, crystalline (general form): **Designated Substances**: (Designated substance - requires code of practice (respirable))

**Canada British Columbia**
• Asphalt: Carcinogens: (IARC Category 2A - Probable Human Carcinogen (fume; occupational exposure to oxidized Bitumens and their emissions during road paving); IARC Category 2B - Possible Human Carcinogen (fume; occupational exposure to straight-run Bitumens and their emissions during road paving)) | Designated Substances: (IARC Category 2B - Possible Human Carcinogen (fume; occupational exposure to straight-run Bitumens and their emissions during road paving); IARC Category 2A - Probable Human Carcinogen (fume; occupational exposure to oxidized Bitumens and their emissions during road paving))

• Crystalline silica (14808-60-7): Carcinogens: (ACGIH Category A2 - Suspected Human Carcinogen; IARC Category 1 - Human Carcinogen) | Designated Substances: (ACGIH Category A2 - Suspected Human Carcinogen; IARC Category 1 - Human Carcinogen)

Canada Manitoba
• Asphalt (8052-42-4): Carcinogens: (A4 Not Classifiable as a Human Carcinogen (fume, Coal tar-free))
• Crystalline silica (14808-60-7): Carcinogens: (A2 Suspected Human Carcinogen)

Canada New Brunswick
• Asphalt (8052-42-4): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen (fumes))

Canada Nova Scotia
• Asphalt (8052-42-4): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen (fume, Coal tar-free))
• Crystalline silica (14808-60-7): Carcinogens: (A2 - Suspected Human Carcinogen)

Canada Ontario
• Crystalline silica (14808-60-7): Designated Substances: (0.10 mg/m3 TWA (respirable fraction, listed under Silica, crystalline))

Canada Quebec
• Crystalline silica (14808-60-7): Carcinogens: (C2 carcinogen - effect suspected in humans)

Canada Saskatchewan
• Crystalline silica as Silica, crystalline (general form): Designated Substances: (Present (respirable size))

Venezuela
• Asphalt (8052-42-4): Ceilings: (Present)
• Crystalline silica (14808-60-7): Ceilings: (Present)

ACGIH
• Asphalt (8052-42-4): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free))
• Crystalline silica (14808-60-7): Carcinogens: (A2 - Suspected Human Carcinogen)

Germany DFG
• Graphite (7782-42-5): Pregnancy: (no risk to embryo/fetus if exposure limits adhered to (inhaled fraction; respirable fraction))
• Zinc powder, stabilized (7440-66-6): Pregnancy: (no risk to embryo/fetus if exposure limits adhered to (respirable; inhalable))
• Asphalt (8052-42-4): Carcinogens: (Category 2 (considered to be carcinogenic for man; aerosol and vapor)) | Skin: (skin notation (aerosol and vapour))
• Crystalline silica (14808-60-7): Carcinogens: (Category 1 (causes cancer in man; alveola fraction))

Exposure Limits Supplemental

Thailand
• Graphite (7782-42-5): Mineral Dusts: (15 mppcf TWA)
• Graphite as Particulates not otherwise classified (PONOC): Mineral Dusts: (15 mppcf TWA (respirable dust); 15 mg/m3 TWA (total dust); 50 mppcf TWA (total dust)); 5 mg/m3 TWA (respirable dust))
• Crystalline silica (14808-60-7): Mineral Dusts: (TWA ((250/(%SiO2 + 5)), mppcf, respirable dust); TWA ((10/(%SiO2 + 2)), mg/m3, respirable dust); TWA ((30/(%SiO2 + 2)), mg/m3, total dust))

Israel

OSHA
• Graphite (7782-42-5): Mineral Dusts: (15 mppcf TWA (natural))
• Graphite as Particulates not otherwise classified (PONOC): Mineral Dusts: (15 mppcf TWA (respirable fraction); 5 mg/m3 TWA (respirable fraction); 50 mppcf TWA (total dust)); 15 mg/m3 TWA (total dust))
• Crystalline silica (14808-60-7): Mineral Dusts: ((250/(%SiO2 + 5) mppcf TWA, respirable fraction; (10)/(%SiO2 + 2) mg/m3 TWA, respirable fraction)

ACGIH
• Copper oxide as Copper compounds: TLV Basis - Critical Effects: (gastrointestinal (dust and mist); irritation (dust and mist))
• Graphite (7782-42-5): TLV Basis - Critical Effects: (pneumoconiosis (all forms except graphite fibers))
• Asphalt (8052-42-4): BEIs: (Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)) | TLV Basis - Critical Effects: (eye and upper respiratory tract irritation (fume))
• Crystalline silica (14808-60-7): TLV Basis - Critical Effects: (lung cancer; pulmonary fibrosis)

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
- Rubber or cloth. 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
- PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)
- 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>Solid</th>
<th>Appearance/Description</th>
<th>Copper semi-solid paste with mild petroleum odor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Copper</td>
<td>Odor</td>
<td>Mild, petroleum.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Data lacking</td>
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</table>

General Properties

<table>
<thead>
<tr>
<th>Property</th>
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<th>Melting Point/Freezing Point</th>
<th>Data lacking</th>
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<tbody>
<tr>
<td>Boiling Point</td>
<td>&gt; 260 °C(&gt; 500 °F)</td>
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<tr>
<td>Decomposition Temperature</td>
<td>Data lacking</td>
<td>pH</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Specific Gravity/Relative Density</td>
<td>Data lacking</td>
<td>Water Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Data lacking</td>
<td>Explosive Properties</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Data lacking</td>
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<td></td>
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Volutility

<table>
<thead>
<tr>
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<th>Vapor Density</th>
<th>Data lacking</th>
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</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
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<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Data lacking</td>
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</table>

Flammability

<table>
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<th>Property</th>
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<th>UEL</th>
<th>Data lacking</th>
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</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>&gt; 171 °C(&gt; 339.8 °F)</td>
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<td></td>
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<tr>
<td>LEL</td>
<td>Data lacking</td>
<td>Autoignition</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Data lacking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Environmental

<table>
<thead>
<tr>
<th>Property</th>
<th>Data lacking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octanol/Water Partition coefficient</td>
<td></td>
</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
**Section 11 - Toxicological Information**

### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Components</th>
<th>Acute Toxicity: Ingestion/Oral-Rat LD50 • 470 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc powder, stabilized (10% TO 25%)</td>
<td>Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Tumorigenic / Carcinogenic: Ingestion/Oral-Mouse TDL0 • 12.6 mg/kg 46 Week(s)-Continuous; Tumorigenic:Carcinogenic by RTECS criteria: Gastrointestinal:Tumors; Tumorigenic:Facilitates action of known carcinogen</td>
</tr>
<tr>
<td>Asphalt (2.8%)</td>
<td>8052-42-4</td>
</tr>
<tr>
<td>Zinc O,O-bis(mixed isobutyl and pentyl) phosphorodithioate (0.714%)</td>
<td>68457-79-4</td>
</tr>
<tr>
<td>Crystalline silica (40%)</td>
<td>14808-60-7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GHS Properties</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>EU/CLP•Data lacking</td>
</tr>
<tr>
<td>Skin corrosion/Irritation</td>
<td>EU/CLP•Data lacking</td>
</tr>
<tr>
<td>Serious eye damage/Irritation</td>
<td>EU/CLP•Data lacking</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>EU/CLP•Data lacking</td>
</tr>
</tbody>
</table>
Respiratory sensitization
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

Aspiration Hazard
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

Carcinogenicity
EU/CLP: Data lacking
UN GHS 4: Carcinogenicity 2
OSHA HCS 2012: Carcinogenicity 2
WHMIS 2015: Carcinogenicity 2

Germ Cell Mutagenicity
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

Toxicity for Reproduction
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

STOT-SE
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

STOT-RE
EU/CLP: Data lacking
UN GHS 4: Data lacking
OSHA HCS 2012: Data lacking
WHMIS 2015: Data lacking

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

Carcinogenic Effects • Repeated and prolonged exposure may cause cancer.

<table>
<thead>
<tr>
<th>Carcinogenic Effects</th>
<th>CAS</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Group 2B-Possible Carcinogen</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>Group 1-Carcinogenic</td>
<td>Known Human Carcinogen</td>
</tr>
</tbody>
</table>

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

Section 12 - Ecological Information
12.1 Toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide (5% TO 10%)</td>
<td>Aquatic Toxicity-Fish: 96 Hour(s) LC50 Gambusia affinis (Western Mosquitofish) &gt;56000 mg/L 15 Day(s) NOEC Cyprinus carpio (Common Carp) 0.0128 mg/L Aquatic Toxicity-Crustacea: 48 Hour(s) EC50 Daphnia magna (Water Flea) 92.7 mg/L Aquatic Toxicity-Algae and Other Aquatic Plant(s): 72 Hour(s) EC50 Pseudokirchneriella subcapitata (Green Algae) 0.014 mg/L 3 Day(s) NOEC Pseudokirchneriella subcapitata (Green Algae) 0.421 mg/L</td>
</tr>
<tr>
<td>Zinc powder, stabilized (10% TO 25%)</td>
<td>Aquatic Toxicity-Fish: 96 Hour(s) LC50 Pimephales promelas (Fathead Minnow) 0.238 mg/L 28 Day(s) NOEC Cyprinus carpio (Common Carp) 0.0026 mg/L Aquatic Toxicity-Crustacea: 21 Day(s) NOEC Daphnia magna (Water Flea) 0.062 mg/L 48 Hour(s) EC50 Ceriodaphnia dubia 0.07 mg/L Aquatic Toxicity-Algae and Other Aquatic Plant(s): 72 Hour(s) EC50 Pseudokirchneriella subcapitata (Green Algae) 0.106 mg/L 14 Day(s) NOEC Euglena gracilis (Flagellate Euglenoid) 0.0075 mg/L</td>
</tr>
</tbody>
</table>

* Very toxic 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 (Zinc powder, Copper oxides)</td>
<td>9</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>TDG UN3077</td>
<td>Environmentally hazardous substance, solid, n.o.s (Zinc powder, Copper oxides)</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 (Zinc powder, Copper oxides)</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 (Zinc powder, Copper oxides)</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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Yes</td>
</tr>
<tr>
<td>Copper oxide</td>
<td>1317-38-0</td>
<td>No</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>Yes</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc O,O-bis(mixed iso-butyl and pentyl) phosphorodithioate</td>
<td>68457-79-4</td>
<td>No</td>
</tr>
<tr>
<td>Zinc powder, stabilized</td>
<td>7440-66-6</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Australia AICS</th>
<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>China</th>
<th>EU EINECS</th>
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<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Copper oxide</td>
<td>1317-38-0</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc O,O-bis(mixed iso-butyl and pentyl) phosphorodithioate</td>
<td>68457-79-4</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc powder, stabilized</td>
<td>7440-66-6</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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### Inventory (Con't.)

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<tr>
<th>Component</th>
<th>CAS</th>
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<th>Japan ENCS</th>
<th>TSCA</th>
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<td>8052-42-4</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Copper oxide</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Crystalline silica</td>
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<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>No</td>
<td>No</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc powder, stabilized</td>
<td>7440-66-6</td>
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<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### United States - California

#### Environment

**U.S. - California - Proposition 65 - Carcinogens List**
- Copper oxide
- Asphalt
- Zinc powder, stabilized
- Zinc O,O-bis(mixed iso-butyl and pentyl) phosphorodithioate
- Crystalline silica
- Graphite

**1317-38-0** Not Listed

**8052-42-4** Not Listed

**7440-66-6** Not Listed

**68457-79-4** Not Listed

**14808-60-7** Not Listed

**7782-42-5** Not Listed

**U.S. - California - Proposition 65 - Developmental Toxicity**
- Copper oxide
- Asphalt
- Zinc powder, stabilized
- Zinc O,O-bis(mixed iso-butyl and pentyl) phosphorodithioate
- Crystalline silica
- Graphite

**1317-38-0** Not Listed

**8052-42-4** Not Listed

**7440-66-6** Not Listed

**68457-79-4** Not Listed

**14808-60-7** Not Listed

**7782-42-5** Not Listed

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

- Copper oxide
- Asphalt
- Zinc powder, stabilized
- Zinc O,O-bis(mixed iso-butyl and pentyl) phosphorodithioate
- Crystalline silica
- Graphite

**1317-38-0** Not Listed

**8052-42-4** Not Listed

**7440-66-6** Not Listed

**68457-79-4** Not Listed

**14808-60-7** Not Listed

**7782-42-5** Not Listed
15.2 Chemical Safety Assessment

• No Chemical Safety Assessment has been carried out.

Table 1: Relevant Phrases

<table>
<thead>
<tr>
<th>Code</th>
<th>Full Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H350i</td>
<td>May cause cancer by inhalation.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

Revision Date

• 18/April/2018

Last Revision Date

• 26/March/2018

Preparation Date

• 26/March/2018

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