SECTION 1. IDENTIFICATION

Product name: API MODIFIED 304- ST

Other means of identification: No data available

SDS-Identcode: 421G

Manufacturer or supplier’s details

Company name of supplier: Bestolife Corporation
Address: 2126 Vanco Drive
Irving TX 75061,
Telephone: 855-243-9164/972-865-8961
Telefax: 214-631-3047
E-mail address: www.bestolife.com

Recommended use of the chemical and restrictions on use

Recommended use: Industrial use
Thread Compound (Pipe Dope) and Jacking grease for use in
Offshore industries
Mining, (without offshore industries)

Restrictions on use: Do not use on oxygen lines or in oxygen enriched atmos-
pheres.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin sensitization: Sub-category 1B
Carcinogenicity: Category 2
Reproductive toxicity: Category 1A

Effects on or via lactation

Specific target organ toxicity - repeated exposure: Category 1 (Kidney, Central nervous system, Blood)

GHS label elements

Hazard pictograms: 

Signal Word: Danger

Hazard Statements: H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs (Kidney, Central nervous
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 dust, fume, gas, mist, vapors or spray.
P263 Avoid contact during pregnancy and while nursing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

**Response:**
P302 + P352 IF ON SKIN: Wash with plenty of water.
P308 + P313 IF exposed or concerned: Get medical attention.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage:**
P405 Store locked up.

**Disposal:**
P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>&gt;= 30 - &lt; 60 *</td>
</tr>
<tr>
<td></td>
<td>Lead</td>
<td>7439-92-1</td>
<td>&gt;= 30 - &lt; 60 *</td>
</tr>
<tr>
<td></td>
<td>Graphite</td>
<td>7782-42-5</td>
<td>&gt;= 10 - &lt; 30 *</td>
</tr>
<tr>
<td></td>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td></td>
<td>Talc</td>
<td>14807-96-6</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td></td>
<td>Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate)</td>
<td>57855-77-3</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td></td>
<td>Quartz</td>
<td>14808-60-7</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td></td>
<td>12-Hydroxy lithium stearate</td>
<td>7620-77-1</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
</tbody>
</table>

* Actual concentration or concentration range is withheld as a trade secret
SECTION 4. FIRST AID MEASURES

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

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

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

In case of eye contact: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

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

Most important symptoms and effects, both acute and delayed: May cause an allergic skin reaction. Suspected of causing cancer. May damage fertility. May damage the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure.

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

Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Lead compounds
Metal oxides
Sulfur oxides

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Personal precautions, protective equipment and emergency procedures:
- Use personal protective equipment.
- Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

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

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

SECTION 7. HANDLING AND STORAGE

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

Advice on safe handling:
- For outdoor use only
- Avoid contact during pregnancy and while nursing.
- Do not get on skin or clothing.
- Do not breathe dust, fume, gas, mist, vapors or spray.
- Do not swallow.
- Avoid contact with eyes.
- Wash skin thoroughly after handling.
- Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
- Keep container tightly closed.
- Do not eat, drink or smoke when using this product.
- Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage:
- Keep in properly labeled containers.
- Store locked up.
- Keep tightly closed.
- Store in accordance with the particular national regulations.

Materials to avoid:
- Do not store with the following product types:
  - Strong oxidizing agents
  - Organic peroxides
  - Explosives
  - Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
</table>

4 / 27
## Distillates (petroleum), hydrotreated heavy naphthenic

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Mist)</th>
<th>STEL (Mist)</th>
<th>TWA (Inhalable particulate matter)</th>
<th>CA AB OEL</th>
<th>CA QC OEL</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-52-5</td>
<td>5 mg/m³</td>
<td>10 mg/m³</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Lead

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Mist)</th>
<th>STEL (Mist)</th>
<th>TWAEV (Mist)</th>
<th>STEV (Mist)</th>
<th>TWA (Mist)</th>
<th>TWA (Inhalable particulate matter)</th>
<th>CA BC OEL</th>
<th>CA ON OEL</th>
<th>CA QC OEL</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
<td>0.05 mg/m³</td>
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<td></td>
<td></td>
<td></td>
</tr>
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</table>

## Graphite

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Mist)</th>
<th>STEL (Mist)</th>
<th>TWAEV (Mist)</th>
<th>STEV (Mist)</th>
<th>TWA (Mist)</th>
<th>TWA (Inhalable particulate matter)</th>
<th>CA BC OEL</th>
<th>CA ON OEL</th>
<th>CA QC OEL</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7782-42-5</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Copper metal powder

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Mist)</th>
<th>STEL (Mist)</th>
<th>TWAEV (Mist)</th>
<th>STEV (Mist)</th>
<th>TWA (Mist)</th>
<th>TWA (Inhalable particulate matter)</th>
<th>CA BC OEL</th>
<th>CA ON OEL</th>
<th>CA QC OEL</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
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<td></td>
</tr>
</tbody>
</table>

## Talc

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWAEV (Mist)</th>
<th>STEL (Mist)</th>
<th>TWAEV (Mist)</th>
<th>STEV (Mist)</th>
<th>TWA (Mist)</th>
<th>TWA (Inhalable particulate matter)</th>
<th>CA BC OEL</th>
<th>CA ON OEL</th>
<th>CA QC OEL</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>14807-96-6</td>
<td>3 mg/m³</td>
<td>3 mg/m³</td>
<td>3 mg/m³</td>
<td>3 mg/m³</td>
<td>3 mg/m³</td>
<td>3 mg/m³</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Substance</td>
<td>TWA (Respirable)</td>
<td>Limit Value</td>
<td>Source</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic 64742-53-6</td>
<td>TWA (Mist) 5 mg/m³</td>
<td>CA AB OEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEL (Mist) 10 mg/m³</td>
<td>CA AB OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Mist) 5 mg/m³</td>
<td>CA AB OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Mist) 10 mg/m³</td>
<td>CA AB OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Inhalable particulate matter) 5 mg/m³</td>
<td>CA BC OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz 14808-60-7</td>
<td>TWA (Respirable particulates) 0.025 mg/m³</td>
<td>CA AB OEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Respirable fraction) 0.1 mg/m³</td>
<td>CA ON OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (respirable dust) 0.1 mg/m³</td>
<td>CA QC OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Respirable particulates) 0.025 mg/m³ (Silica)</td>
<td>CA BC OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Respirable particulate matter) 0.025 mg/m³ (Silica)</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-Hydroxy lithium stearate 7620-77-1</td>
<td>TWA 10 mg/m³</td>
<td>CA AB OEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 10 mg/m³</td>
<td>CA BC OEL</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Inhalable particulate matter) 10 mg/m³</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA (Respirable particulate matter) 3 mg/m³</td>
<td>ACGIH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Quartz
Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Lead (Lead)</td>
<td>In blood</td>
<td>Not critical</td>
<td>200 µg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

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

Personal protective equipment

Respiratory protection:
If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type:
Combined particulates and organic vapor type

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

Eye protection:
Wear the following personal protective equipment:
Safety glasses

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

Hygiene measures:
If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Viscous semi-solid

Color:
dark
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Petroleum</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable (not an aqueous solution)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>(\geq 200 , ^\circ C)</td>
</tr>
<tr>
<td>Method:</td>
<td>ASTM D 92, Cleveland open cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not classified as a flammability hazard</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.9</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>negligible</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flow time</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
</tbody>
</table>
Molecular weight : No data available
Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Can react with strong oxidizing agents.
Conditions to avoid : None known.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.
Components:

<table>
<thead>
<tr>
<th>Distillates (petroleum), hydrotreated heavy naphthenic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
</tr>
<tr>
<td>LD50 (Rat): &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Method: OECD Test Guideline 401</td>
</tr>
<tr>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
</tr>
<tr>
<td>LC50 (Rat): &gt; 5.53 mg/l</td>
</tr>
<tr>
<td>Exposure time: 4 h</td>
</tr>
<tr>
<td>Test atmosphere: dust/mist</td>
</tr>
<tr>
<td>Method: OECD Test Guideline 403</td>
</tr>
<tr>
<td>Assessment: The substance or mixture has no acute inhalation toxicity</td>
</tr>
<tr>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
</tr>
<tr>
<td>LD50 (Rabbit): &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Method: OECD Test Guideline 402</td>
</tr>
<tr>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>

| Lead:                                                  |
| Acute oral toxicity                                    |
| LD50 (Rat): > 2,000 mg/kg                              |
| Remarks: Based on data from similar materials          |
| Acute dermal toxicity                                  |
| LD50 (Rat): > 2,000 mg/kg                              |
| Remarks: Based on data from similar materials          |

| Graphite:                                              |
| Acute oral toxicity                                    |
| LD50 (Rat): > 2,000 mg/kg                              |
| Remarks: Based on data from similar materials          |
SAFETY DATA SHEET
API MODIFIED 304- ST

Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

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

**Copper metal powder:**

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhalation toxicity

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

**Talc:**

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

**Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):**

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

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

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

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

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

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

12-Hydroxy lithium stearate:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Skin corrosion/irritation
Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy naphthenic:
Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Lead:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on data from similar materials

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

Copper metal powder:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Talc:
Species: Rabbit
Result: No skin irritation

Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
Species: Rabbit
Result: Skin irritation
Remarks: Based on data from similar materials

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

12-Hydroxy lithium stearate:
Species: Rabbit
Result: No skin irritation
Serious eye damage/eye irritation
Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy naphthenic:
Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

Lead:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials

Graphite:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Copper metal powder:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Talc:
Species: Rabbit
Result: No eye irritation

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Remarks: Based on data from similar materials

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

12-Hydroxy lithium stearate:
Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials
Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy naphthenic:
- **Test Type**: Buehler Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Result**: negative
- **Remarks**: Based on data from similar materials

Lead:
- **Test Type**: Maximization Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Method**: OECD Test Guideline 406
- **Result**: negative
- **Remarks**: Based on data from similar materials

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

Copper metal powder:
- **Test Type**: Maximization Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Method**: OECD Test Guideline 406
- **Result**: negative

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

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):
- **Test Type**: Buehler Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Result**: positive
- **Remarks**: Based on data from similar materials
- **Assessment**: Probability or evidence of low to moderate skin sensitization rate in humans
### Distillates (petroleum), hydrotreated light naphthenic:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Buehler Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of exposure</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Species</td>
<td>Guinea pig</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 406</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
</tbody>
</table>

### 12-Hydroxy lithium stearate:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Local lymph node assay (LLNA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of exposure</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Species</td>
<td>Mouse</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 429</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
</tbody>
</table>

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Distillates (petroleum), hydrotreated heavy naphthenic:

<table>
<thead>
<tr>
<th>Genotoxicity in vitro</th>
<th>Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Result: negative</td>
</tr>
</tbody>
</table>

### Lead:

<table>
<thead>
<tr>
<th>Genotoxicity in vitro</th>
<th>Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: negative Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Genotoxicity in vivo</th>
<th>Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: Ingestion Result: positive Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

### Graphite:

<table>
<thead>
<tr>
<th>Genotoxicity in vitro</th>
<th>Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test Type: In vitro mammalian cell gene mutation test</td>
</tr>
</tbody>
</table>
Method: OECD Test Guideline 476  
Result: negative

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

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

- Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
  Species: Mouse  
  Application Route: Ingestion  
  Result: negative  
  Remarks: Based on data from similar materials

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

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

**Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):**
- Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)  
  Method: OECD Test Guideline 471  
  Result: negative  
  Remarks: Based on data from similar materials

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

  Test Type: Chromosome aberration test in vitro  
  Method: OECD Test Guideline 473  
  Result: negative  
  Remarks: Based on data from similar materials

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

- Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
SAFETY DATA SHEET

API MODIFIED 304- ST

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
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</thead>
<tbody>
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<td>11/04/2020</td>
<td>119841-00021</td>
<td>05/06/2020</td>
<td>05/18/2015</td>
</tr>
</tbody>
</table>

- cytogenetic assay
  - Species: Mouse
  - Application Route: Intraperitoneal injection
  - Method: OECD Test Guideline 474
  - Result: negative

**Carcinogenicity**

Suspected of causing cancer.

**Product:**

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

**Components:**

- **Distillates (petroleum), hydrotreated heavy naphthenic:**
  - Species: Mouse
  - Application Route: Skin contact
  - Exposure time: 78 weeks
  - Method: OECD Test Guideline 451
  - Result: negative

- **Lead:**
  - Species: Rat
  - Application Route: Ingestion
  - Exposure time: 2 Years
  - Result: positive
  - Remarks: Based on data from similar materials

- **Carcinogenicity - Assessment:** Limited evidence of carcinogenicity in animal studies

- **Talc:**
  - Species: Mouse
  - Application Route: inhalation (dust/mist/fume)
  - Exposure time: 2 Years
  - Result: negative

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

- **Quartz:**
  - Species: Humans
  - Application Route: inhalation (dust/mist/fume)
  - Result: positive
  - Remarks: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.
Carcinogenicity - Assessment: Positive evidence from human epidemiological studies (inhala-

Reproductive toxicity
May damage fertility. May damage the unborn child.
May cause harm to breast-fed children.

Components:

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

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

Reproductive toxicity - Assessment: Positive evidence of adverse effects on sexual function and
fertility from human epidemiological studies., Positive
 evidence of adverse effects on development from human
epidemiological studies., Studies indicating a hazard to babies
during the lactation period

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

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

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

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

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

**Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):**
- Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Method: OECD Test Guideline 422  
  Result: negative  
  Remarks: Based on data from similar materials

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

**Distillates (petroleum), hydrotreated light naphthenic:**
- Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test  
  Species: Rat  
  Application Route: Ingestion  
  Result: negative

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

**STOT-single exposure**
Not classified based on available information.

**STOT-repeated exposure**
Causes damage to organs (Kidney, Central nervous system, Blood) through prolonged or repeated exposure.

**Components:**

**Lead:**
- Target Organs: Kidney, Central nervous system, Blood  
  Assessment: Causes damage to organs through prolonged or repeated exposure.
### Quartz:
- **Routes of exposure**: Inhalation (dust/mist/fume)
- **Target Organs**: Lungs
- **Assessment**: Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

### 12-Hydroxy lithium stearate:
- **Routes of exposure**: Ingestion
- **Assessment**: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

### Repeated dose toxicity

#### Components:

#### Distillates (petroleum), hydrotreated heavy naphthenic:
- **Species**: Rat
- **NOAEL**: > 0.98 mg/l
- **Application Route**: Inhalation (dust/mist/fume)
- **Exposure time**: 28 Days
- **Remarks**: Based on data from similar materials

#### Lead:
- **Species**: Rat
- **NOAEL**: 0.0015 mg/kg
- **LOAEL**: 0.005 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 6 - 12 Months
- **Remarks**: Based on data from similar materials

#### Copper metal powder:
- **Species**: Rat
- **NOAEL**: >= 2 mg/m³
- **Application Route**: Inhalation (dust/mist/fume)
- **Exposure time**: 28 Days

#### Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
- **Species**: Rat
- **NOAEL**: 100 mg/kg
- **LOAEL**: 300 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 90 Days
- **Method**: OECD Test Guideline 408

#### Distillates (petroleum), hydrotreated light naphthenic:
- **Species**: Rabbit
- **NOAEL**: 1,000 mg/kg
- **Application Route**: Skin contact
- **Exposure time**: 4 Weeks
- **Method**: OECD Test Guideline 410
Quartz:
Species: Humans
LOAEL: 0.053 mg/m³
Application Route: inhalation (dust/mist/fume)
Remarks: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

12-Hydroxy lithium stearate:
Species: Rat
NOAEL: > 88 mg/kg
Application Route: Ingestion
Exposure time: 90 Days

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Distillates (petroleum), hydrotreated heavy naphthenic:
Toxicity to fish:
- LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
  Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
  Exposure time: 48 h
  Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants:
- EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201
  Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): 10 mg/l
  Exposure time: 21 d
  Remarks: Based on data from similar materials

Toxicity to microorganisms:
- NOEC: > 1.93 mg/l
  Exposure time: 10 min
  Remarks: Based on data from similar materials

Lead:
Toxicity to fish:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.107 mg/l
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Ceriodaphnia dubia (water flea)): 0.029 mg/l
  Exposure time: 48 h
<table>
<thead>
<tr>
<th>Toxins</th>
<th>Endpoint Description</th>
<th>Test Material</th>
<th>Test Substance</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to algae/aquatic</td>
<td>ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.025 mg/l</td>
<td></td>
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<tr>
<td>Exposure time: 72h</td>
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<td></td>
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<tr>
<td>EC10</td>
<td>(Pseudokirchneriella subcapitata (green algae)): 6.1 µg/l</td>
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<tr>
<td>Exposure time: 72h</td>
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<tr>
<td>Toxicity to fish (Chronic</td>
<td>EC10 (Pimephales promelas (fathead minnow)): 20 µg/l</td>
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<tr>
<td>toxicity)</td>
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<tr>
<td>Exposure time: 30d</td>
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<tr>
<td>Toxicity to daphnia and other</td>
<td>EC10 (Ceriodaphnia dubia (water flea)): 1.7 µg/l</td>
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<tr>
<td>aquatic invertebrates (Chronic</td>
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<tr>
<td>toxicity)</td>
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<tr>
<td>Exposure time: 7d</td>
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<tr>
<td><strong>Graphite</strong></td>
<td></td>
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</tr>
<tr>
<td>Toxicity to fish</td>
<td>LL50 (Danio rerio (zebra fish)): &gt; 100 mg/l</td>
<td></td>
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</tr>
<tr>
<td>Exposure time: 96h</td>
<td></td>
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<tr>
<td>Test substance: Water</td>
<td></td>
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<tr>
<td>Accommodated Fraction</td>
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</tr>
<tr>
<td>Method: OECD Test Guideline 203</td>
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</tr>
<tr>
<td>Toxicity to daphnia and other</td>
<td>EL50 (Daphnia magna (Water flea)): &gt; 100 mg/l</td>
<td></td>
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<td></td>
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<tr>
<td>aquatic invertebrates</td>
<td></td>
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</tr>
<tr>
<td>Exposure time: 48h</td>
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<tr>
<td>Test substance: Water</td>
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<tr>
<td>Accommodated Fraction</td>
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<tr>
<td>Method: OECD Test Guideline 202</td>
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<tr>
<td>Toxicity to algae/aquatic</td>
<td>EL50 (Pseudokirchneriella subcapitata (green algae)): &gt; 100 mg/l</td>
<td></td>
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<tr>
<td>plants</td>
<td></td>
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<tr>
<td>Exposure time: 72h</td>
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<tr>
<td>Test substance: Water</td>
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<tr>
<td>Accommodated Fraction</td>
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<tr>
<td>Method: OECD Test Guideline 201</td>
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<tr>
<td>NOELR (Pseudokirchneriella</td>
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</tr>
<tr>
<td>subcapitata (green algae))</td>
<td>&gt; 100 mg/l</td>
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<td></td>
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<tr>
<td>Exposure time: 72h</td>
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<td></td>
</tr>
<tr>
<td>Test substance: Water</td>
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<tr>
<td>Accommodated Fraction</td>
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</tr>
<tr>
<td>Method: OECD Test Guideline 201</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicity to microorganisms</td>
<td>EC50: &gt; 1,012.5 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure time: 3h</td>
<td></td>
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</tr>
<tr>
<td>Method: OECD Test Guideline 209</td>
<td></td>
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</tr>
<tr>
<td><strong>Copper metal powder</strong></td>
<td></td>
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</tr>
<tr>
<td>Toxicity to fish</td>
<td>LC50: &gt; 10 - 100 µg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure time: 96h</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Toxicity to fish (Chronic</td>
<td>NOEC: &gt; 1 - 10 µg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>toxicity)</td>
<td></td>
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<tr>
<td><strong>Talc</strong></td>
<td></td>
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</tr>
<tr>
<td>Toxicity to fish</td>
<td>LC50 (Brachydanio rerio (zebrafish)): &gt; 100,000 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure time: 24h</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):

Toxicity to fish: LL50 (Cyprinus carpio (Carp)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

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

Toxicity to algae/aquatic plants:
EL50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
EL10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOELR (Daphnia magna (Water flea)): 2.2 mg/l
Exposure time: 21 d
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211

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

Distillates (petroleum), hydrotreated light naphthenic:

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

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

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Toxicity to microorganisms: NOEC (Photobacterium phosphoreum): > 2.17 mg/l
Exposure time: 4 d

Quartz:

Ecotoxicology Assessment

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

12-Hydroxy lithium stearate:

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

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

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

Persistence and degradability

Components:

Distillates (petroleum), hydrotreated heavy naphthenic:

Biodegradability: Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):

Biodegradability: Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated light naphthenic:

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

12-Hydroxy lithium stearate:

Biodegradability: Result: Readily biodegradable.
Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
Bioaccumulative potential

Components:

Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
Partition coefficient: n-octanol/water
Log Pow: > 6.6

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead, Copper metal powder)
Class: 9
Packing group: III
Labels: 9

IATA-DGR
UN/ID No.: UN 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Lead, Copper metal powder)
Class: 9
Packing group: III
Labels: Miscellaneous
Packing instruction (cargo aircraft): 956
Packing instruction (passenger aircraft): 956
Environmentally hazardous: yes

IMDG-Code
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (Lead, Copper metal powder)
Class: 9
Packing group: III
Labels: 9
EmS Code: F-A, S-F
Marine pollutant: yes

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

Domestic regulation

TDG
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Lead, Copper metal powder)
Class: 9
Packing group: III
Labels: 9
ERG Code: 171
Marine pollutant: yes (Lead, Copper metal powder)

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:

DSL: All components of this product are on the Canadian DSL
TSCA: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
AICS: All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)
CA BC OEL: Canada. British Columbia OEL
CA ON OEL: Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL: Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
SAFETY DATA SHEET

API MODIFIED 304- ST

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ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA AB OEL / STEL : 15-minute occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average
CA ON OEL / TWA : Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV : Time-weighted average exposure value
CA QC OEL / STEV : Short-term exposure value

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 11/04/2020
Date format : mm/dd/yyyy

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

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

CA / Z8