

## 1. Identification

### Product identifier

**Product Name** COPPER JOINT LEAD FREE

### Other means of identification

**Product Code(s)** 635050

**UN number or ID number** UN3077

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** Lubricant and sealant used for threaded connections

**Restrictions on use** Do not use on oxygen lines or in oxygen enriched atmospheres.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Bestolife Corporation  
2126 Vanco Drive  
Irving TX 75061  
855-243-9164/972-865-8961  
Telefax 214-631-3047  
www.bestolife.com

#### **Manufacturer Address**

Bestolife Corporation  
2126 Vanco Drive  
Irving TX 75061  
855-243-9164/972-865-8961  
Telefax 214-631-3047  
www.bestolife.com

### Emergency telephone number

**Emergency Telephone** CHEMTRAC U.S.: 800-424-9300, International +1 703-527-3887 (24-hours/7 days)

## 2. Hazard(s) identification

### Classification

|                                   |             |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Skin sensitization                | Category 1  |

**Appearance** Viscous semi-solid

**Physical state** Solid

**Odor** Petroleum

### Label elements

### **Warning**

### **Hazard statements**

Causes serious eye irritation

May cause an allergic skin reaction



#### Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wash face, hands and any exposed skin thoroughly after handling

Avoid breathing dust, fume, gas, mist, vapors and spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves, protective clothing, eye protection and face protection

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

##### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice and attention

##### Skin

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice and attention

Take off contaminated clothing and wash it before reuse

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

#### Other information

May be harmful if swallowed. May be harmful in contact with skin. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

| Chemical name                                          | CAS No.      | Weight-%     | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|--------------------------------------------------------|--------------|--------------|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Distillates (petroleum), hydrotreated heavy naphthenic | 64742-52-5   | >= 50 - < 70 | -                                                                            | -                                                           |
| Graphite                                               | 7782-42-5    | >= 10 - < 20 | -                                                                            | -                                                           |
| Copper metal powder                                    | 7440-50-8    | >= 10 - < 20 | -                                                                            | -                                                           |
| Talc                                                   | 14807-96-6   | >= 5 - < 10  | -                                                                            | -                                                           |
| 12-Hydroxy lithium stearate                            | 7620-77-1    | >= 1 - < 5   | -                                                                            | -                                                           |
| Dolomite                                               | 16389-88-1   | >= 1 - < 5   | -                                                                            | -                                                           |
| Calcium bis(dinonylnaphthalenesulphonate)              | 1474044-79-5 | >= 1 - < 5   | -                                                                            | -                                                           |
| Calcium oxide                                          | 1305-78-8    | >= 1 - < 5   | -                                                                            | -                                                           |
| Quartz                                                 | 14808-60-7   | >= 1 - < 5   | -                                                                            | -                                                           |
| Antimony, dialkyl dithiocarbamate                      | 15890-25-2   | >= 0 - < 1.0 | -                                                                            | -                                                           |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## Additional information

NOTE: As per Note L, the carcinogen classification does NOT apply to this preparation because the producer of "Petroleum distillates, hydrotreated heavy naphthenic" declares that it contains less than 3% DMSO extractable material by IP-346

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

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.                                                                                                                                                                     |
| <b>Inhalation</b>                         | Remove to fresh air.                                                                                                                                                                                                                                                                |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.                                                                                                                                                |
| <b>Ingestion</b>                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.                                                                                                                                                                       |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).                                                                                                                                                                                       |

### Most important symptoms and effects, both acute and delayed

|                 |                                                                                       |
|-----------------|---------------------------------------------------------------------------------------|
| <b>Symptoms</b> | Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. |
|-----------------|---------------------------------------------------------------------------------------|

### Indication of any immediate medical attention and special treatment needed

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| <b>Note to physicians</b> | May cause sensitization in susceptible persons. Treat symptomatically. |
|---------------------------|------------------------------------------------------------------------|

## 5. Fire-fighting measures

|                                                                       |                                                                                                                                    |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                                   | Dry chemical, CO <sub>2</sub> , water spray or alcohol-resistant foam.                                                             |
| <b>Large Fire</b>                                                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                                                 |
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.                                                                  |
| <b>Specific hazards arising from the chemical</b>                     | Product is or contains a sensitizer. May cause sensitization by skin contact.                                                      |
| <b>Explosion data</b>                                                 |                                                                                                                                    |
| <b>Sensitivity to mechanical impact</b>                               | None.                                                                                                                              |
| <b>Sensitivity to static discharge</b>                                | None.                                                                                                                              |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep in properly labeled containers. Store in accordance with the particular national regulations.

**8. Exposure controls/personal protection****Control Parameters****Exposure Limits**

| Chemical name                                                     | ACGIH TLV                                                                                                                                                                                             | OSHA PEL                                                                                                                                                                                                                                                                                                            | NIOSH                                                                                  |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5 | TWA: 5 mg/m <sup>3</sup> inhalable particulate matter excluding metal working fluids, highly & severely refined<br>Exposure by all routes should be carefully controlled to levels as low as possible | TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 5 mg/m <sup>3</sup>                                                                                                                                                                                                                                                      | IDLH: 2500 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup> |
| Graphite 7782-42-5                                                | TWA: 2 mg/m <sup>3</sup> respirable particulate matter all forms except graphite fibers                                                                                                               | TWA: 15 mg/m <sup>3</sup> total dust synthetic<br>TWA: 5 mg/m <sup>3</sup> respirable fraction synthetic<br>TWA: 15 mppcf respirable dust natural<br>(vacated) TWA: 2.5 mg/m <sup>3</sup> respirable dust natural<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust synthetic<br>(vacated) TWA: 5 mg/m <sup>3</sup> | IDLH: 1250 mg/m <sup>3</sup><br>TWA: 2.5 mg/m <sup>3</sup> natural respirable dust     |

|                                                                            |                                                                                                                                      | respirable fraction synthetic<br>TWA: 15 mppcf natural                                                                                                                                                                                  |                                                                                                                                 |                                                        |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Copper metal powder<br>7440-50-8                                           | TWA: 0.2 mg/m <sup>3</sup> fume                                                                                                      | TWA: 0.1 mg/m <sup>3</sup> fume<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>(vacated) TWA: 0.1 mg/m <sup>3</sup> Cu<br>dust, fume, mist                                                                                                | IDLH: 100 mg/m <sup>3</sup> dust, fume<br>and mist<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>TWA: 0.1 mg/m <sup>3</sup> fume |                                                        |
| Talc<br>14807-96-6                                                         | TWA: 2 mg/m <sup>3</sup> respirable<br>particulate matter particulate<br>matter containing no Asbestos<br>and <1% Crystalline silica | TWA: 20 mppcf if 1% Quartz<br>or more, use Quartz limit<br>(vacated) TWA: 2 mg/m <sup>3</sup><br>respirable dust <1% Crystalline<br>silica, containing no Asbestos<br>TWA: 20 mppcf if 1% Quartz or<br>more, use Quartz limit           | IDLH: 1000 mg/m <sup>3</sup><br>TWA: 2 mg/m <sup>3</sup> containing no<br>Asbestos and <1% Quartz<br>respirable dust            |                                                        |
| Calcium oxide<br>1305-78-8                                                 | TWA: 2 mg/m <sup>3</sup>                                                                                                             | TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 5 mg/m <sup>3</sup> not<br>in effect as a result of<br>reconsideration                                                                                                                       | IDLH: 25 mg/m <sup>3</sup><br>TWA: 2 mg/m <sup>3</sup>                                                                          |                                                        |
| Quartz<br>14808-60-7                                                       | TWA: 0.025 mg/m <sup>3</sup> respirable<br>particulate matter                                                                        | TWA: 50 µg/m <sup>3</sup><br>(vacated) TWA: 0.1 mg/m <sup>3</sup><br>respirable dust<br>: (250)/(%SiO <sub>2</sub> + 5) mppcf<br>TWA respirable fraction<br>: (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup><br>TWA respirable fraction | IDLH: 50 mg/m <sup>3</sup> respirable dust<br>TWA: 0.05 mg/m <sup>3</sup> respirable<br>dust                                    |                                                        |
| Antimony, dialkyl<br>dithiocarbamate<br>15890-25-2                         | TWA: 0.5 mg/m <sup>3</sup> Sb                                                                                                        | TWA: 0.5 mg/m <sup>3</sup> Sb<br>(vacated) TWA: 0.5 mg/m <sup>3</sup> Sb                                                                                                                                                                | IDLH: 50 mg/m <sup>3</sup> Sb<br>TWA: 0.5 mg/m <sup>3</sup> Sb                                                                  |                                                        |
| Chemical name                                                              | Alberta                                                                                                                              | British Columbia                                                                                                                                                                                                                        | Ontario                                                                                                                         | Quebec                                                 |
| Distillates (petroleum),<br>hydrotreated heavy<br>naphthenic<br>64742-52-5 | TWA: 5 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup>                                                                               | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>                                                                                                                                                                                  | TWA: 5 mg/m <sup>3</sup><br>TWA:                                                                                                | TWA: 5 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup> |
| Graphite<br>7782-42-5                                                      | TWA: 2 mg/m <sup>3</sup>                                                                                                             | TWA: 2 mg/m <sup>3</sup>                                                                                                                                                                                                                | TWA: 2 mg/m <sup>3</sup>                                                                                                        | TWA: 2 mg/m <sup>3</sup>                               |
| Copper metal powder<br>7440-50-8                                           | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>                                                                               | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>                                                                                                                                                                                  | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>                                                                          | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> |
| Talc<br>14807-96-6                                                         | TWA: 2 mg/m <sup>3</sup>                                                                                                             | TWA: 2 mg/m <sup>3</sup>                                                                                                                                                                                                                | TWA: 2 mg/m <sup>3</sup>                                                                                                        | TWA: 2 mg/m <sup>3</sup>                               |
| Calcium oxide<br>1305-78-8                                                 | TWA: 2 mg/m <sup>3</sup>                                                                                                             | TWA: 2 mg/m <sup>3</sup>                                                                                                                                                                                                                | TWA: 2 mg/m <sup>3</sup>                                                                                                        | TWA: 2 mg/m <sup>3</sup>                               |
| Quartz<br>14808-60-7                                                       | TWA: 0.025 mg/m <sup>3</sup>                                                                                                         | TWA: 0.025 mg/m <sup>3</sup>                                                                                                                                                                                                            | TWA: 0.10 mg/m <sup>3</sup>                                                                                                     | TWA: 0.1 mg/m <sup>3</sup>                             |
| Antimony, dialkyl<br>dithiocarbamate<br>15890-25-2                         | TWA: 0.5 mg/m <sup>3</sup>                                                                                                           | TWA: 0.5 mg/m <sup>3</sup>                                                                                                                                                                                                              | TWA: 0.5 mg/m <sup>3</sup>                                                                                                      | TWA: 0.5 mg/m <sup>3</sup>                             |

**Other information**

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

**Appropriate engineering controls****Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Hand protection** PPE16 - Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training; Nitrile or neoprene preferred.

REMARKS: Inspect gloves before use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier information). Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Remove gloves with care avoiding skin contamination. Wash hands before breaks and at the end of workday. Wear suitable gloves.

| Gloves              |                                       |                 |                    |
|---------------------|---------------------------------------|-----------------|--------------------|
| Duration of contact | PPE - Glove material                  | Glove thickness | Break through time |
| n/a                 | Wear protective nitrile rubber gloves | 0.50 - 0.70 mm  | > 60 minutes       |
| n/a                 | Wear protective Neoprene™ gloves      | 0.50 - 0.70 mm  | > 60 minutes       |

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash before reuse.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                                       |                    |
|---------------------------------------|--------------------|
| <b>Appearance</b>                     | Viscous semi-solid |
| <b>Physical state</b>                 | Solid              |
| <b>Color</b>                          | dark, copper       |
| <b>Odor (includes odor threshold)</b> | Petroleum          |

| Property                                                         | Values             | Remarks • Method                                                                            |
|------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------|
| <b>Melting point / freezing point</b>                            | No data available  | None known                                                                                  |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available  | None known                                                                                  |
| <b>Flammability</b>                                              | No data available  | None known                                                                                  |
| <b>Flammability Limit in Air</b>                                 |                    | None known                                                                                  |
| Upper flammability or explosive limits                           | No data available  |                                                                                             |
| Lower flammability or explosive limits                           | No data available  |                                                                                             |
| <b>Flash point</b>                                               | >= 200 °C / 392 °F | Method ASTM D 92, Cleveland open cup Distillates (petroleum), hydrotreated heavy naphthenic |
| <b>Autoignition temperature</b>                                  | No data available  | None known                                                                                  |
| <b>Decomposition temperature</b>                                 | No data available  | None known                                                                                  |
| SADT (°C)                                                        | No data available  | None known                                                                                  |
| <b>pH</b>                                                        | No data available  | None known                                                                                  |
| pH (as aqueous solution)                                         | No data available  | None known                                                                                  |
| <b>Kinematic viscosity</b>                                       | No data available  | None known                                                                                  |
| <b>Dynamic viscosity</b>                                         | No data available  | None known                                                                                  |
| <b>Solubility</b>                                                | Negligible         | None known                                                                                  |
| Water solubility                                                 | Negligible         | None known                                                                                  |
| <b>Partition coefficient n-octanol/water (log</b>                |                    | None known                                                                                  |

|                                                   |                   |                          |
|---------------------------------------------------|-------------------|--------------------------|
| value)                                            |                   |                          |
| <b>Vapor pressure (includes evaporation rate)</b> |                   | None known               |
| <b>Evaporation rate</b>                           |                   | None known               |
| <b>Density and/or relative density</b>            | 1.2               | None known               |
| <b>Bulk density</b>                               |                   |                          |
| <b>Liquid Density</b>                             |                   |                          |
| <b>Relative vapor density</b>                     | No data available | None known               |
| <b>Particle characteristics</b>                   |                   | No information available |
| <b>Particle Size</b>                              |                   |                          |
| <b>Particle Size Distribution</b>                 |                   |                          |

Other information**10. Stability and reactivity**

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| <b>Reactivity</b>                         | Not classified as a reactivity hazard.    |
| <b>Chemical stability</b>                 | Stable under normal conditions.           |
| <b>Possibility of hazardous reactions</b> | Can react with strong oxidizing agents.   |
| <b>Conditions to avoid</b>                | None known based on information supplied. |
| <b>Incompatible materials</b>             | Strong oxidizing agents.                  |
| <b>Hazardous decomposition products</b>   | None known based on information supplied. |

**11. Toxicological information**Information on likely routes of exposure**Product Information**

|                     |                                                                                                                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.                                                                                                                                                                                                                               |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.                                                                                                                                                                              |
| <b>Skin contact</b> | May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause irritation. Prolonged contact may cause redness and irritation. May be harmful in contact with skin. |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.                                                                                                                                                                                          |

Symptoms related to the physical, chemical and toxicological characteristics

|                       |                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------|
| <b>Symptoms</b>       | Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. |
| <b>Acute toxicity</b> | No information available.                                                             |

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

|                 |                |
|-----------------|----------------|
| ATEmix (oral)   | 3,796.40 mg/kg |
| ATEmix (dermal) | 4,491.50 mg/kg |

**Component Information**

| Chemical name                                                                                                | Oral LD50             | Dermal LD50              | Inhalation LC50                      |
|--------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|--------------------------------------|
| Distillates (petroleum), hydrotreated heavy naphthenic<br>CAS: 64742-52-5<br>ID: C64742525<br>>= 50 - < 70 % | > 5000 mg/kg ( Rat )  | > 5000 mg/kg ( Rabbit )  | -                                    |
| Graphite<br>CAS: 7782-42-5<br>ID: C7782425<br>>= 10 - < 20 %                                                 | -                     | -                        | > 2000 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper metal powder<br>CAS: 7440-50-8<br>ID: C7440508<br>>= 10 - < 20 %                                      | -                     | -                        | > 5.11 mg/L ( Rat ) 4 h              |
| 12-Hydroxy lithium stearate<br>CAS: 7620-77-1<br>ID: C7620771<br>>= 1 - < 5 %                                | -                     | > 3000 mg/kg ( Rabbit )  | -                                    |
| Calcium oxide<br>CAS: 1305-78-8<br>ID: C1305788<br>>= 1 - < 5 %                                              | = 500 mg/kg ( Rat )   | -                        | > 6.04 mg/L ( Rat ) 4 h              |
| Antimony, dialkyl dithiocarbamate<br>CAS: 15890-25-2<br>ID: C15890252<br>>= 0 - < 1.0 %                      | > 16400 mg/kg ( Rat ) | > 16000 mg/kg ( Rabbit ) | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                                          |                                                                                        |
|------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | No information available.                                                              |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation. |
| <b>Respiratory or skin sensitization</b> | May cause an allergic skin reaction.                                                   |
| <b>Germ cell mutagenicity</b>            | No information available.                                                              |
| <b>Carcinogenicity</b>                   |                                                                                        |

NOTE: As per Note L, the carcinogen classification does NOT apply to this preparation because the producer of "Petroleum distillates, hydrotreated heavy naphthenic" declares that it contains less than 3% DMSO extractable material by IP-346

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

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                                                                                                | ACGIH | IARC    | NTP   | OSHA |
|--------------------------------------------------------------------------------------------------------------|-------|---------|-------|------|
| Distillates (petroleum), hydrotreated heavy naphthenic<br>CAS: 64742-52-5<br>ID: C64742525<br>>= 50 - < 70 % | A2    | Group 1 | Known | X    |
| Talc<br>CAS: 14807-96-6<br>ID: C14807966<br>>= 5 - < 10 %                                                    | -     | Group 3 | -     | X    |
| Quartz                                                                                                       | A2    | Group 1 | Known | X    |

|                                                  |  |  |  |  |
|--------------------------------------------------|--|--|--|--|
| CAS: 14808-60-7<br>ID: C14808607<br>>= 1 - < 5 % |  |  |  |  |
|--------------------------------------------------|--|--|--|--|

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Reproductive toxicity</b>    | No information available. |
| <b>STOT - single exposure</b>   | No information available. |
| <b>STOT - repeated exposure</b> | No information available. |
| <b>Aspiration hazard</b>        | No information available. |

## 12. Ecological information

|                    |                                                    |
|--------------------|----------------------------------------------------|
| <b>Ecotoxicity</b> | Harmful to aquatic life with long lasting effects. |
|--------------------|----------------------------------------------------|

| Chemical name                                                     | Algae/aquatic plants                                                                                                                               | Fish                                                                                                                                                                                                                                                                                                                                                                                                                                         | Toxicity to microorganisms | Crustacea                                    |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------|
| Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5 | -                                                                                                                                                  | LC50: >5000mg/L (96h, <i>Oncorhynchus mykiss</i> )                                                                                                                                                                                                                                                                                                                                                                                           | -                          | EC50: >1000mg/L (48h, <i>Daphnia magna</i> ) |
| Graphite 7782-42-5                                                | -                                                                                                                                                  | LC50: >100mg/L (96h, <i>Danio rerio</i> )                                                                                                                                                                                                                                                                                                                                                                                                    | -                          | -                                            |
| Copper metal powder 7440-50-8                                     | EC50: 0.0426 - 0.0535mg/L (72h, <i>Pseudokirchneriella subcapitata</i> )<br>EC50: 0.031 - 0.054mg/L (96h, <i>Pseudokirchneriella subcapitata</i> ) | LC50: 0.0068 - 0.0156mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: <0.3mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =0.2mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =0.052mg/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: =1.25mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: =0.3mg/L (96h, <i>Cyprinus carpio</i> )<br>LC50: =0.8mg/L (96h, <i>Cyprinus carpio</i> )<br>LC50: =0.112mg/L (96h, <i>Poecilia reticulata</i> ) | -                          | EC50: =0.03mg/L (48h, <i>Daphnia magna</i> ) |
| Talc 14807-96-6                                                   | -                                                                                                                                                  | LC50: >100g/L (96h, <i>Brachydanio rerio</i> )                                                                                                                                                                                                                                                                                                                                                                                               | -                          | -                                            |
| Calcium oxide 1305-78-8                                           | -                                                                                                                                                  | LC50: =1070mg/L (96h, <i>Cyprinus carpio</i> )                                                                                                                                                                                                                                                                                                                                                                                               | -                          | -                                            |

## Persistence and degradability

|                                  |                                    |
|----------------------------------|------------------------------------|
| <b>Bioaccumulative potential</b> | There is no data for this product. |
|----------------------------------|------------------------------------|

| Chemical name                                          | Partition coefficient |
|--------------------------------------------------------|-----------------------|
| Calcium bis(dinonylnaphthalenesulphonate) 1474044-79-5 | 6.6                   |

## Mobility in soil

|                              |                           |
|------------------------------|---------------------------|
| <b>Other adverse effects</b> | No information available. |
|------------------------------|---------------------------|

## 13. Disposal considerations

### Disposal methods

|                                            |                                                                                                                               |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste from residues/unused products</b> | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.               |
| <b>Contaminated packaging</b>              | Do not reuse empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. |
| <b>California waste information</b>        | This product contains one or more substances that are listed with the State of California as a hazardous waste.               |

## 14. Transport information

**Note:** DG for domestic (ground) transport applies to containers over 119 gallons or 450 litres.

IMDG Clause 2.10.2.7 / IATA Special Provision A197: Marine pollutants or dangerous goods packaged in single or combination packages containing a net quantity per single or inner package of 5 L or less for liquids or 5 kg for solids are not subject to any other transport regulations, provided the packaging meets general provisions.

### DOT

|                                               |                                                                                                                             |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>UN number or ID number</b>                 | UN3077                                                                                                                      |
| <b>Proper shipping name</b>                   | Environmentally hazardous substance, solid, n.o.s.                                                                          |
| <b>Transport hazard class(es)</b>             | 9                                                                                                                           |
| <b>Packing group</b>                          | III                                                                                                                         |
| <b>Reportable quantity (lbs)</b>              | Copper metal powder: RQ (lb)= 5000.00                                                                                       |
| <b>Reportable quantity (lbs) (calculated)</b> | Copper metal powder: RQ (lb)= 45183.00                                                                                      |
| <b>Reportable quantity (kg)</b>               | (Copper metal powder: RQ (kg)= 2270.00)                                                                                     |
| <b>Reportable quantity (kg) (calculated)</b>  | Copper metal powder: RQ (kg)= 20512.91                                                                                      |
| <b>DOT Marine Pollutant</b>                   | M                                                                                                                           |
| <b>Marine pollutant</b>                       | Copper metal powder, Antimony, dialkyl dithiocarbamate                                                                      |
| <b>Description</b>                            | UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Antimony, dialkyl dithiocarbamate), 9, III |
| <b>Special Provisions</b>                     | 8, 146, 335, 384, 441, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33                                                        |
| <b>Emergency Response Guide Number</b>        | 171                                                                                                                         |

### TDG

|                                   |                                                                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>UN number or ID number</b>     | UN3077                                                                                                                      |
| <b>UN proper shipping name</b>    | Environmentally hazardous substance, solid, n.o.s.                                                                          |
| <b>Transport hazard class(es)</b> | 9                                                                                                                           |
| <b>Packing group</b>              | III                                                                                                                         |
| <b>Special Provisions</b>         | 16, 99                                                                                                                      |
| <b>Marine pollutant name</b>      | Copper metal powder.                                                                                                        |
| <b>Description</b>                | UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Antimony, dialkyl dithiocarbamate), 9, III |

### MEX

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| <b>UN number or ID number</b>     | UN3077                                             |
| <b>UN proper shipping name</b>    | Environmentally hazardous substance, solid, n.o.s. |
| <b>Transport hazard class(es)</b> | 9                                                  |
| <b>Packing group</b>              | III                                                |

**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder,

|                            |                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Special Provisions         | Antimony, dialkyl dithiocarbamate), 9, III<br>274, 331, 335, 375                                                                              |
| <b><u>ICAO (air)</u></b>   |                                                                                                                                               |
| UN number or ID number     | UN3077                                                                                                                                        |
| UN proper shipping name    | Environmentally hazardous substance, solid, n.o.s.                                                                                            |
| Transport hazard class(es) | 9                                                                                                                                             |
| Packing group              | III                                                                                                                                           |
| Description                | UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Antimony, dialkyl dithiocarbamate), 9, III                   |
| Special Provisions         | A97, A158, A179, A197, A215                                                                                                                   |
| <b><u>IATA</u></b>         |                                                                                                                                               |
| UN number or ID number     | UN3077                                                                                                                                        |
| UN proper shipping name    | Environmentally hazardous substance, solid, n.o.s.                                                                                            |
| Technical Name             | Copper metal powder, Antimony, dialkyl dithiocarbamate                                                                                        |
| Transport hazard class(es) | 9                                                                                                                                             |
| Packing group              | III                                                                                                                                           |
| Environmental hazards      | Yes                                                                                                                                           |
| Special Provisions         | A97, A158, A179, A197, A215                                                                                                                   |
| ERG Code                   | 9L                                                                                                                                            |
| Description                | UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Antimony, dialkyl dithiocarbamate), 9, III                   |
| <b><u>IMDG</u></b>         |                                                                                                                                               |
| UN number or ID number     | UN3077                                                                                                                                        |
| UN proper shipping name    | Environmentally hazardous substance, solid, n.o.s.                                                                                            |
| Technical Name             | Copper metal powder, Antimony, dialkyl dithiocarbamate                                                                                        |
| Transport hazard class(es) | 9                                                                                                                                             |
| Packing group              | III                                                                                                                                           |
| Marine pollutant indicator | M                                                                                                                                             |
| Marine pollutant name      | Copper metal powder, Antimony, dialkyl dithiocarbamate                                                                                        |
| Special Provisions         | 274, 335, 375, 966, 967, 969                                                                                                                  |
| EMS-No.                    | F-A S-F                                                                                                                                       |
| Description                | UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Antimony, dialkyl dithiocarbamate), 9, III, Marine pollutant |

## 15. Regulatory information

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

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### International Inventories

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

| Chemical name                                          | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|--------------------------------------------------------|------------|--------------------------|---------------------------------|
| Distillates (petroleum), hydrotreated heavy naphthenic | 64742-52-5 | Present                  | Active                          |
| Graphite                                               | 7782-42-5  | Present                  | Active                          |

| Chemical name                                                    | CAS No.      | Inventory Listing Status | Commercial Activity Designation |
|------------------------------------------------------------------|--------------|--------------------------|---------------------------------|
| Copper metal powder                                              | 7440-50-8    | Present                  | Active                          |
| Talc                                                             | 14807-96-6   | Present                  | Active                          |
| 12-Hydroxy lithium stearate                                      | 7620-77-1    | Present                  | Active                          |
| Dolomite                                                         | 16389-88-1   | Present                  | Active                          |
| Calcium bis(dinonylnaphthalenesulphonate)                        | 1474044-79-5 | -                        | Unknown *                       |
| Calcium oxide                                                    | 1305-78-8    | Present                  | Active                          |
| Quartz                                                           | 14808-60-7   | Present                  | Active                          |
| Ethenylbenzene polymer with 2-methyl-1,3-butadiene, hydrogenated | 68648-89-5   | Present                  | Active                          |
| Antimony, dialkyl dithiocarbamate                                | 15890-25-2   | Present                  | Active                          |
| Calcium petroleum sulfonates                                     | 61789-86-4   | Present                  | Active                          |
| Lubricating oils (petroleum), hydrotreated spent                 | 64742-58-1   | Present                  | Active                          |
| Stearic acid                                                     | 57-11-4      | Present                  | Active                          |
| Magnesium oxide                                                  | 1309-48-4    | Present                  | Active                          |
| Distillates (petroleum), solvent-refined light paraffinic        | 64741-89-5   | Present                  | Active                          |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic        | 64742-65-0   | Present                  | Active                          |
| Distillates (petroleum), hydrotreated heavy paraffinic           | 64742-54-7   | Present                  | Active                          |
| Polyisobutylene                                                  | 9003-27-4    | Present                  | Active                          |
| Polybutene                                                       | 9003-29-6    | Present                  | Active                          |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDSL**

All components of this product are on the Canadian DSL.

**EINECS/ELINCS**

All components are listed or exempted.

**ENCS**

All components are listed or exempted.

**IECSC**

All components are listed or exempted.

**KECL**

All components are listed or exempted.

**PICCS**

All components are listed or exempted.

**AIIC**

All components are listed on AICIS, or are exempt.

**NZIoC**

All components are listed or exempted.

**TCSI**

All components are listed or exempted.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**NZIoC** - New Zealand Inventory of Chemicals

**TCSI** - Taiwan Chemical Substance Inventory

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name | SARA 313 - Threshold Values % |
|---------------|-------------------------------|
|---------------|-------------------------------|

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Copper metal powder<br>CAS: 7440-50-8<br>ID: C7440508<br>>= 10 - < 20 % | 1.0 |
|-------------------------------------------------------------------------|-----|

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                                                           | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------------------------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Copper metal powder<br>CAS: 7440-50-8<br>ID: C7440508<br>>= 10 - < 20 % | -                           | X                      | X                         | -                          |

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name                                                           | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|-------------------------------------------------------------------------|--------------------------|------------------------------------|
| Copper metal powder<br>CAS: 7440-50-8<br>ID: C7440508<br>>= 10 - < 20 % | 5000 lb                  | -                                  |

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical name                                              | California Proposition 65 |
|------------------------------------------------------------|---------------------------|
| Quartz<br>CAS: 14808-60-7<br>ID: C14808607<br>>= 1 - < 5 % | Carcinogen                |

**U.S. State Right-to-Know Regulations**

| Chemical name                                                                                                | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------------------------------------------------------------------------------------|------------|---------------|--------------|
| Distillates (petroleum), hydrotreated heavy naphthenic<br>CAS: 64742-52-5<br>ID: C64742525<br>>= 50 - < 70 % | X          | X             | X            |
| Graphite<br>CAS: 7782-42-5<br>ID: C7782425<br>>= 10 - < 20 %                                                 | X          | X             | X            |
| Copper metal powder<br>CAS: 7440-50-8<br>ID: C7440508<br>>= 10 - < 20 %                                      | X          | X             | X            |
| Talc<br>CAS: 14807-96-6<br>ID: C14807966<br>>= 5 - < 10 %                                                    | X          | X             | X            |

|                                                                                                                    |   |   |   |
|--------------------------------------------------------------------------------------------------------------------|---|---|---|
| Calcium oxide<br>CAS: 1305-78-8<br>ID: C1305788<br>>= 1 - < 5 %                                                    | X | X | X |
| Quartz<br>CAS: 14808-60-7<br>ID: C14808607<br>>= 1 - < 5 %                                                         | X | X | X |
| Antimony, dialkyl dithiocarbamate<br>CAS: 15890-25-2<br>ID: C15890252<br>>= 0.1 - < 1 %                            | X | - | X |
| Magnesium oxide<br>CAS: 1309-48-4<br>ID: C1309484<br>>= 0.01 - < 0.1 %                                             | X | X | X |
| Distillates (petroleum), hydrotreated heavy paraffinic<br>CAS: 64742-54-7<br>ID: C64742547<br>>= 0.01 - < 0.1 %    | X | X | X |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic<br>CAS: 64742-65-0<br>ID: C64742650<br>>= 0.01 - < 0.1 % | X | X | X |
| Distillates (petroleum), solvent-refined light paraffinic<br>CAS: 64741-89-5<br>ID: C64741895<br>>= 0.01 - < 0.1 % | - | X | - |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

|                            |                           |                       |                           |                              |
|----------------------------|---------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b>                | <b>Health hazards</b> 2   | <b>Flammability</b> 1 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                | <b>Health hazards</b> 2 * | <b>Flammability</b> 1 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| Chronic Hazard Star Legend |                           |                       |                           |                              |

\* = Chronic Health Hazard

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: Exposure controls/personal protection**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | Sk*  | Skin designation                 |

**Key literature references and sources for data used to compile the SDS**

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

U.S. Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
United Nations World Health Organization (WHO)

**Revision date** 30-Oct-2025

**Revision Note**

**Disclaimer**

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.

**End of Safety Data Sheet**