SAFETY DATA SHEET

COPPER SUPREME SPECIAL BLEND® PLUS

SECTION 1. IDENTIFICATION

Product name: COPPER SUPREME SPECIAL BLEND® PLUS
Other means of identification: No data available
SDS-Identcode: 476G

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 atmospheres.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations
Eye irritation: Category 2A
Skin sensitization: Sub-category 1A

GHS label elements
Hazard pictograms:
Signal Word: Warning
Hazard Statements: H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.
Precautionary Statements: Prevention:
P261 Avoid breathing dust, fume, gas, mist, vapors or spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, eye protection and face protection.
Response:
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>64742-54-7</td>
<td>&gt;= 30 - &lt; 60 *</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>&gt;= 10 - &lt; 30 *</td>
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<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>&gt;= 10 - &lt; 30 *</td>
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<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>&gt;= 10 - &lt; 30 *</td>
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<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>&gt;= 5 - &lt; 10 *</td>
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<tr>
<td>Dilithium azelate</td>
<td>38900-29-7</td>
<td>&gt;= 5 - &lt; 10 *</td>
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<tr>
<td>Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony</td>
<td>15991-76-1</td>
<td>&gt;= 1 - &lt; 5 *</td>
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<tr>
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<td>1305-78-8</td>
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<tr>
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<td>Quartz</td>
<td>14808-60-7</td>
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<td>Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate)</td>
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<tr>
<td>2,5-Bis(octyldithio)-1,3,4-thiadiazole</td>
<td>13539-13-4</td>
<td>&gt;= 0.1 - &lt; 1 *</td>
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<tr>
<td>Benzenesulphonic acid, propenated, calcium salts, overbased</td>
<td>68610-84-4</td>
<td>&gt;= 0.1 - &lt; 1 *</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 if symptoms occur.

**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:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

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

**Most important symptoms and effects, both acute and delayed:** May cause an allergic skin reaction. Causes serious eye irritation.

**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
  - Metal oxides
  - Nitrogen oxides (NOx)
  - 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.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- **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
- Do not get on skin or clothing.
- Avoid breathing dust, fume, gas, mist, vapors or spray.
- Do not swallow.
- Do not get in 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
- Take care to prevent spills, waste and minimize release to the environment.

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

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Ingredients with workplace control parameters</th>
</tr>
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<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
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</tbody>
</table>

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

**Quartz**

**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 goggles

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, copper

Odor : Petroleum

Odor Threshold : No data available

pH : Not applicable (not an aqueous solution)

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available
Flash point : >= 204 °C  
   Method: Pensky-Martens closed cup
Evaporation rate : Not applicable
Flammability (solid, gas) : Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available
Vapor pressure : Not applicable
Relative vapor density : Not applicable
Relative density : 1.2
Solubility(ies)  
   Water solubility : negligible
Partition coefficient: n-octanol/water : Not applicable
Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity  
   Viscosity, kinematic : Not applicable
Flow time : No data available
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.
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.

Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

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
Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

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
Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Graphite:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
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

**Dilithium azelate:**

Acute oral toxicity: LD50 (Rat): > 300 - 2,000 mg/kg
Method: OECD Test Guideline 420
Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

**Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony:**

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

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

**Calcium oxide:**

Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
## Acute Inhalation Toxicity
- **Copper Supreme Special Blend® Plus**
  - **Test substance**: Rat
  - **Exposure time**: 4 h
  - **Test atmosphere**: dust/mist
  - **Method**: OECD Test Guideline 436
  - **Remarks**: Based on data from similar materials

## Acute Dermal Toxicity
- **Distillates (petroleum), hydrotreated light naphthenic**
  - **LD50 (Rabbit)**: > 2,500 mg/kg
  - **Method**: OECD Test Guideline 402
  - **Assessment**: The substance or mixture has no acute dermal toxicity
  - **Remarks**: Based on data from similar materials

## Acute Oral Toxicity
- **Distillates (petroleum), hydrotreated light naphthenic**
  - **LD50 (Rat)**: > 5,000 mg/kg
  - **Method**: OECD Test Guideline 401

## Acute Inhalation Toxicity
- **Antimony, dialkyl dithiocarbamate**
  - **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
- **Antimony, dialkyl dithiocarbamate**
  - **LD50 (Rabbit)**: > 2,000 mg/kg
  - **Assessment**: The substance or mixture has no acute dermal toxicity

## Acute Oral Toxicity
- **Quartz**
  - **LD50 (Rat)**: > 5,000 mg/kg

## Acute Inhalation Toxicity
- **Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate)**
  - **LC50 (Rat)**: 3.08 mg/l
  - **Exposure time**: 4 h
  - **Test atmosphere**: dust/mist
  - **Method**: OECD Test Guideline 403

## Acute Dermal Toxicity
- **Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate)**
  - **LD50 (Rabbit)**: > 2,000 mg/kg
  - **Method**: OECD Test Guideline 402

## 2,5-Bis(octyldithio)-1,3,4-thiadiazole
- **Acute oral toxicity**: LD50 (Rat): > 5,000 mg/kg
  - **Method**: OECD Test Guideline 401

- **Acute inhalation toxicity**: LC50 (Rat): 3.08 mg/l
  - **Exposure time**: 4 h
  - **Test atmosphere**: dust/mist
  - **Method**: OECD Test Guideline 403

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

- **Benzenesulphonic acid, propenated, calcium salts, overbased:**
  - **Acute oral toxicity**: LD50 (Rat): > 5,000 mg/kg
    - Method: OECD Test Guideline 401
    - Remarks: Based on data from similar materials
  - **Acute inhalation toxicity**: LC50 (Rat): > 1.9 mg/l
    - Exposure time: 4 h
    - Test atmosphere: dust/mist
    - Method: OECD Test Guideline 403
    - Remarks: Based on data from similar materials
  - **Acute dermal toxicity**: LD50 (Rat): > 5,000 mg/kg
    - Method: OECD Test Guideline 402
    - Remarks: Based on data from similar materials

- **Skin corrosion/irritation**: Not classified based on available information.

**Components:**

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

- **Distillates (petroleum), hydrotreated heavy naphthenic:**
  - **Species**: Rabbit
  - **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

- **Dilithium azelate:**
  - **Species**: reconstructed human epidermis (RhE)
  - **Method**: OECD Test Guideline 439
### Calcium oxide:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: Skin irritation
- **Remarks**: Based on data from similar materials

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

### 2,5-Bis(octyldithio)-1,3,4-thiadiazole:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: Skin irritation

### Benzencesulphonic acid, propenated, calcium salts, overbased:
- **Species**: Rabbit
- **Result**: No skin irritation
- **Remarks**: Based on data from similar materials

### Serious eye damage/eye irritation
Causes serious eye irritation.

## Components:

### Distillates (petroleum), hydrotreated heavy paraffinic:
- **Species**: Rabbit
- **Result**: No eye irritation
- **Method**: OECD Test Guideline 405
- **Remarks**: Based on data from similar materials

### Distillates (petroleum), hydrotreated heavy naphthenic:
- **Species**: Rabbit
- **Result**: No eye irritation
- **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

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

Calcium oxide:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

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

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

2,5-Bis(octyldithio)-1,3,4-thiadiazole:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Benzenesulphonic acid, propenated, calcium salts, overbased:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
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 paraffinic:**
- Test Type: Buehler Test
- Routes of exposure: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative
- Remarks: Based on data from similar materials

**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

**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

**Dilithium azelate:**
- Test Type: Local lymph node assay (LLNA)
- Routes of exposure: Skin contact
- Species: Mouse
- Method: OECD Test Guideline 429
- Result: negative
- Remarks: Based on data from similar materials

**Calcium oxide:**
- Test Type: Local lymph node assay (LLNA)
- Routes of exposure: Skin contact
- Species: Mouse
- Method: OECD Test Guideline 429
- Result: negative
- Remarks: Based on data from similar materials
Distillates (petroleum), hydrotreated light naphthenic:

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<th>Test Type</th>
<th>Buehler Test</th>
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<tbody>
<tr>
<td>Routes of exposure</td>
<td>Skin contact</td>
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<tr>
<td>Species</td>
<td>Guinea pig</td>
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<tr>
<td>Method</td>
<td>OECD Test Guideline 406</td>
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<tr>
<td>Result</td>
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Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

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<td>Guinea pig</td>
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<tr>
<td>Result</td>
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<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
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Assessment: Probability or evidence of low to moderate skin sensitization rate in humans

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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<td>Species</td>
<td>Guinea pig</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 406</td>
</tr>
<tr>
<td>Result</td>
<td>positive</td>
</tr>
</tbody>
</table>

Assessment: Probability or evidence of high skin sensitization rate in humans

Benzenesulphonic acid, propenated, calcium salts, overbased:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Human repeat insult patch test (HRIPT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of exposure</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Result</td>
<td>positive</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Assessment: Probability or evidence of skin sensitization in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

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: Intraperitoneal injection
- Method: OECD Test Guideline 474
- Result: negative
### Distillates (petroleum), hydrotreated heavy naphthenic:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genotoxicity in vitro</td>
<td>Bacterial reverse mutation assay (AMES)</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>OECD Test Guideline 471</td>
<td></td>
</tr>
<tr>
<td>Genotoxicity in vivo</td>
<td>Mammalian erythrocyte micronucleus test</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>(in vivo cytogenetic assay)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Mouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Intraperitoneal injection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 474</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Based on data from similar materials

### Graphite:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genotoxicity in vitro</td>
<td>Bacterial reverse mutation assay (AMES)</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>OECD Test Guideline 471</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In vitro mammalian cell gene mutation test</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 476</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chromosome aberration test in vitro</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 473</td>
<td></td>
</tr>
</tbody>
</table>

### Copper metal powder:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genotoxicity in vitro</td>
<td>Bacterial reverse mutation assay (AMES)</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>OECD Test Guideline 471</td>
<td></td>
</tr>
<tr>
<td>Genotoxicity in vivo</td>
<td>Mammalian erythrocyte micronucleus test</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>(in vivo cytogenetic assay)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species: Mouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Based on data from similar materials

### Talc:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genotoxicity in vitro</td>
<td>DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
<tr>
<td>Genotoxicity in vivo</td>
<td>Chromosome aberration test in vitro</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application Route: Ingestion</td>
<td></td>
</tr>
</tbody>
</table>

### Dilithium azelate:

Remarks: Based on data from similar materials
Genotoxicity in vitro

- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative

- 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

Calcium oxide:

Genotoxicity in vitro

- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative

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

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)
  Species: Mouse
  Application Route: Intraperitoneal injection
  Method: OECD Test Guideline 474
  Result: negative

Antimony, dialkyl dithiocarbamate:

Genotoxicity in vitro

- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative

Genotoxicity in vivo

- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Intraperitoneal injection
  Method: OECD Test Guideline 474
  Result: equivocal
Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):

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

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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

- 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

Benzenesulphonic acid, propenated, calcium salts, overbased:

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

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Ingestion
  Method: OECD Test Guideline 474
  Result: negative
**Carcinogenicity**
Not classified based on available information.

**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 paraffinic:**
- **Species**: Mouse
- **Application Route**: Skin contact
- **Exposure time**: 78 weeks
- **Method**: OECD Test Guideline 451
- **Result**: negative
- **Remarks**: Based on data from similar materials

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

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

**Calcium oxide:**
- **Species**: Rat
- **Application Route**: Ingestion
- **Exposure time**: 104 weeks
- **Result**: negative
- **Remarks**: Based on data from similar materials

**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 (inhalation)

Reproductive toxicity:
Not classified based on available information.

Components:

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

**Graphite:**

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

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

**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

Dilithium azelate:
Effects on fertility:
- Test Type: Reproduction/Developmental toxicity screening test
- Species: Rat
- Application Route: Skin contact
- Result: negative
- Remarks: Based on data from similar materials

Calcium oxide:
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: Embryo-fetal development
- Species: Mouse
- Application Route: Ingestion
- Method: OECD Test Guideline 414
- Result: negative

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

Antimony, dialkyl dithiocarbamate:
Effects on fertility:
- Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
- Species: Rat
Effects on fetal development:

Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

Remarks:
Based on data from similar materials

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

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

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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

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

Benzenesulphonic acid, propenated, calcium salts, overbased:

Effects on fertility:

Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative

Remarks:
Based on data from similar materials

STOT-single exposure
Not classified based on available information.
Components:

Calcium oxide:
Assessment: May cause respiratory irritation.

STOT-repeated exposure
Not classified based on available information.

Components:

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.

Repeated dose toxicity

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:
Species: Rabbit
NOAEL: 1,000 mg/kg
Application Route: Skin contact
Exposure time: 4 Weeks
Method: OECD Test Guideline 410
Remarks: Based on data from similar materials

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

Copper metal powder:
Species: Rat
NOAEL: >= 2 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days
Remarks: Based on data from similar materials

Dilithium azelate:
Species: Rat
NOAEL: 1,089.75 mg/kg
Application Route: Skin contact
Exposure time: 28 Days
Remarks: Based on data from similar materials
Calcium oxide:

- **Species**: Rat
- **NOAEL**: $>= 0.399 \text{ mg/l}$
- **Application Route**: inhalation (dust/mist/fume)
- **Exposure time**: 90 Days
- **Method**: OECD Test Guideline 413

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

Antimony, dialkyl dithiocarbamate:

- **Species**: Rat
- **NOAEL**: $>= 1,000 \text{ mg/kg}$
- **Application Route**: Ingestion
- **Exposure time**: 54 Days

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.

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

- **Species**: Rat
- **NOAEL**: 100 mg/kg
- **LOAEL**: 300 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 90 Days
- **Method**: OECD Test Guideline 408

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

- **Species**: Rat
- **NOAEL**: 330 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 54 Days
- **Method**: OECD Test Guideline 422

Benzenesulphonic acid, propenated, calcium salts, overbased:

- **Species**: Rat
- **NOAEL**: $> 300 \text{ mg/kg}$
- **Application Route**: Ingestion
- **Exposure time**: 29 Days
- **Method**: OECD Test Guideline 407
Remarks: Based on data from similar materials

Species: Rat
NOAEL: > 600 mg/kg
Application Route: Skin contact
Exposure time: 28 Days
Method: OECD Test Guideline 410
Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 10,250 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): 15,470 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): 30,940 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:
EC50 (Selenastrum capricornutum (green algae)): 70,100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 60,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:
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
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 100
### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

<table>
<thead>
<tr>
<th>Plants</th>
<th>mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>Method: OECD Test Guideline 201</td>
<td></td>
</tr>
<tr>
<td>Remarks: Based on data from similar materials</td>
<td></td>
</tr>
</tbody>
</table>

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 10 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to microorganisms: NOEC: > 1.93 mg/l

Exposure time: 10 min

Method: DIN 38 412 Part 8

Remarks: Based on data from similar materials

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

#### Toxicity to fish

LC50 (Pimpephales 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

### Graphite:

#### Toxicity to fish

LL50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 203

#### 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

#### Toxicity to algae/aquatic plants

EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC50: > 1,012.5 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Copper metal powder:

Toxicity to fish: LC50: > 10 - 100 µg/l
Exposure time: 96 h

Toxicity to fish (Chronic toxicity): NOEC: > 1 - 10 µg/l

Talc:

Toxicity to fish: LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l
Exposure time: 24 h

Dilithium azelate:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 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 - 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0.02 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Ecotoxicology Assessment

Chronic aquatic toxicity: Very toxic to aquatic organisms, may cause long-term adverse
Calcium oxide:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 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)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
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
Antimony, dialkyl dithiocarbamate:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
  NOEC (Daphnia magna (Water flea)): 0.02 mg/l
  Exposure time: 21 d
  Method: OECD Test Guideline 211

Ecotoxicology Assessment
Chronic aquatic toxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):
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
2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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

Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): 45 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: LL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC50: > 1,000 mg/l
Exposure time: 3 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 209

Benzenesulphonic acid, propenated, calcium salts, overbased:

Toxicity to fish: LL50 (Pimephales promelas (fathead minnow)): > 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
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC50: > 100 mg/l
Exposure time: 8 h
Persistence and degradability

**Product:**

Biodegradability: Result: Readily biodegradable.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Biodegradability: Result: Not readily biodegradable.

Biodegradation: 31 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

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

Biodegradability: Result: Not readily biodegradable.

Biodegradation: 2 - 4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

**Dilithium azelate:**

Biodegradability: Result: Readily biodegradable.

Biodegradation: 83 %

Exposure time: 30 d

Method: OECD Test Guideline 301D

Remarks: Based on data from similar materials

**Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony:**

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

**Antimony, dialkyl dithiocarbamate:**

Biodegradability: Result: Not readily biodegradable.

Biodegradation: 20 %

Exposure time: 28 d

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

Biodegradability: Result: Not readily biodegradable.

Remarks: Based on data from similar materials

**2,5-Bis(octyldithio)-1,3,4-thiadiazole:**
Biodegradability: Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Benzenesulphonic acid, propenated, calcium salts, overbased:
Biodegradability: Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Based on data from similar materials

Bioaccumulative potential:

Components:

Dilithium azelate:
Partition coefficient: n-octanol/water: log Pow: -3.53

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

2,5-Bis(octyldithio)-1,3,4-thiadiazole:
Partition coefficient: n-octanol/water: log Pow: > 6.5
Method: OECD Test Guideline 117

Benzenesulphonic acid, propenated, calcium salts, overbased:
Partition coefficient: n-octanol/water: log Pow: > 4
Remarks: Expert judgment

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

<table>
<thead>
<tr>
<th>UN number</th>
<th>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</th>
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</thead>
<tbody>
<tr>
<td>Class</td>
<td>9</td>
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<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Labels</td>
<td>Miscellaneous</td>
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<tr>
<td>Packing instruction (cargo aircraft)</td>
<td>956</td>
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<tr>
<td>Packing instruction (passenger aircraft)</td>
<td>956</td>
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### IATA-DGR

<table>
<thead>
<tr>
<th>UN/ID No.</th>
<th>UN 3077</th>
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<tbody>
<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</td>
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<tr>
<td>Class</td>
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</tr>
<tr>
<td>Packing group</td>
<td>III</td>
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<tr>
<td>Packing instruction (passenger aircraft)</td>
<td>956</td>
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</table>

### IMDG-Code

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<tr>
<td>Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</td>
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<tr>
<td>Class</td>
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<td>III</td>
</tr>
<tr>
<td>Labels</td>
<td>9</td>
</tr>
<tr>
<td>EmS Code</td>
<td>F-A, S-F</td>
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<tr>
<td>Marine pollutant</td>
<td>yes (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</td>
</tr>
</tbody>
</table>

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

### TDG

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN 3077</th>
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<tr>
<td>Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</td>
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<td>Class</td>
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<td>Labels</td>
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<td>Marine pollutant</td>
<td>yes (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S']) antimony</td>
</tr>
</tbody>
</table>

### 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)
- **CA AB OEL**: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
- **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
- **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
SAFETY DATA SHEET

COPPER SUPREME SPECIAL BLEND® PLUS

Version 11.0  Revision Date: 10/23/2020  SDS Number: 115086-00020  Date of last issue: 05/06/2020
Date of first issue: 05/12/2015

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: 10/23/2020
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