SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

3000®

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : 3000®

SDS-Identcode : 325G

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Industrial use, Thread Compound (Pipe Dope) and Jacking grease for use in Offshore industries, Mining, (without offshore industries)

Recommended restrictions on use : Do not use on oxygen lines or in oxygen enriched atmospheres.

1.3 Details of the supplier of the safety data sheet

Company : Bestolife Corporation  INTERTEK FRANCE
2126 Vanco Drive  27400 HEUDEBOUVILLE
75061, FRANCE

Telephone : 855-243-9164/972-865-8961  +33 385 991270

Telefax : 214-631-3047  +33 385 991288

E-mail address of person responsible for the SDS : www.bestolife.com/christian.gimenez@intertek.com/if.reach@intertek.com

1.4 Emergency telephone number

CHEMTREC: +(44)-870-8200418; Internntnl: +1-703-527-3887 NHS Drct: +44 0845 4647 (Medical only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :
Signal word    : Warning

Hazard statements  : H317  May cause an allergic skin reaction.
                    H412  Harmful to aquatic life with long lasting effects.

Precautionary statements  : Prevention:
                           P272  Contaminated work clothing should not be allowed out
                               of the workplace.
                           P273  Avoid release to the environment.
                           P280  Wear protective gloves.

                           Response:
                           P333 + P313  If skin irritation or rash occurs: Get medical
                           advice/attention.
                           P362 + P364  Take off contaminated clothing and wash it
                           before reuse.

Hazardous components which must be listed on the label:
2,5-Bis(octyldithio)-1,3,4-thiadiazole

2.3 Other hazards
None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC-No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index-No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Registration number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dilithium azelate</td>
<td>38900-29-7</td>
<td>Acute Tox. 4; H302</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>254-184-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>Carc. 1A; H350i STOT RE 1; H372 (Lungs)</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>238-878-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tris[bis(2-ethylhexyl)dithiocarbamoato-S,S')] antimony</td>
<td>15991-76-1</td>
<td>Acute Tox. 4; H302 Acute Tox. 4; H332 Aquatic Chronic 1; H410</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
<tr>
<td></td>
<td>240-130-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>051-003-00-9</td>
<td>M-Factor (Chronic aquatic toxicity): 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15991-76-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boric acid</td>
<td>10043-35-3</td>
<td>Repr. 1B; H360FD</td>
<td>&gt;= 1 - &lt; 5.5</td>
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<tr>
<td></td>
<td>233-139-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>005-007-00-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119486683-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony, dialkyl dithiocarbamate</td>
<td>15890-25-2</td>
<td>Acute Tox. 4; H302 Acute Tox. 4; H332 Aquatic Chronic 1;</td>
<td>&gt;= 0.25 - &lt; 1</td>
</tr>
<tr>
<td></td>
<td>240-028-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>051-003-00-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of 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.

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).

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 soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

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

4.2 Most important symptoms and effects, both acute and delayed

Risks: May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically and supportively.
SECTION 5: Firefighting measures

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

Unsuitable extinguishing media:
None known.

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
Exposure to combustion products may be a hazard to health.

Hazardous combustion products:
- Carbon oxides
- Metal oxides
- Nitrogen oxides (NOx)
- Sulphur oxides
- Boron oxides

5.3 Advice for firefighters
Special protective equipment for firefighters:
In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions:
Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions
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.

6.3 Methods and material for containment and cleaning up
Methods for 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.

6.4 Reference to other sections
See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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, vapours or spray.
- Do not swallow.
- Avoid contact with eyes.
- 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.

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage: Do not store with the following product types: Strong oxidizing agents

7.3 Specific end use(s)
Specific use(s): No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>TWA (inhalable dust)</td>
<td>10 mg/m3</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>
Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., Talc is defined as the mineral talc together with other hydrous phyllosilicates including chlorite and carbonate materials which occur with it, but excluding amphibole asbestos and crystalline silica., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.

Further information: Carcinogens or mutagens

Further information: Capable of causing cancer and/or heritable genetic damage.

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

Graphite

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>0.3 mg/m3</td>
</tr>
</tbody>
</table>
### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic</td>
<td>Oral (Secondary Poisoning)</td>
<td>9.33 mg/kg food</td>
</tr>
<tr>
<td>Dilithium azelate</td>
<td>Fresh water</td>
<td>0.023 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.002 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.23 mg/l</td>
</tr>
<tr>
<td>Boric acid</td>
<td>Fresh water</td>
<td>2.9 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>13.7 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>2.9 mg/l</td>
</tr>
</tbody>
</table>
Sewage treatment plant | 10 mg/l
---|---
Soil | 5.7 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures
Minimize workplace exposure concentrations.

Personal protective equipment

Eye protection
Wear the following personal protective equipment:
- Safety glasses
- Equipment should conform to BS EN 166

Hand protection

Material: Chemical-resistant gloves
Remarks: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and 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.

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).

Respiratory protection
If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- Equipment should conform to BS EN 14387
- Filter type: Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Viscous semi-solid</td>
</tr>
<tr>
<td>Colour</td>
<td>black</td>
</tr>
<tr>
<td>Odour</td>
<td>Petroleum</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable (not an aqueous solution)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;= 200 °C</td>
</tr>
<tr>
<td>Method</td>
<td>ASTM D 92, Cleveland open cup</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td></td>
</tr>
</tbody>
</table>
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

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : 1.2

Density : No data available

Solubility(ies)

Water solubility : negligible

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Flow time : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight : No data available

Particle size : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Not classified as a reactivity hazard.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous reactions : Can react with strong oxidizing agents.
10.4 Conditions to avoid

Conditions to avoid: None known.

10.5 Incompatible materials

Materials to avoid: Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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: > 2,000 mg/kg
  Method: Calculation method

Acute inhalation toxicity:
- Acute toxicity estimate: > 5 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: Calculation method

Components:

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

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

Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony:
- Acute oral toxicity:
  Acute toxicity estimate: 2,000 mg/kg
  Method: Expert judgement
  Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
### Acute Inhalation Toxicity
- **Acute toxicity estimate:** 5 mg/l
- **Exposure time:** 4 h
- **Test atmosphere:** dust/mist
- **Method:** Expert judgement
- **Remarks:** Based on harmonised classification in EU regulation 1272/2008, Annex VI

### Acute Dermal Toxicity
- **LD50 (Rabbit):** > 5,000 mg/kg
- **Remarks:** Based on data from similar materials

#### Boric Acid:
- **Acute oral toxicity:**
  - LD50 (Rat): 3,450 mg/kg

- **Acute inhalation toxicity**
  - LC50 (Rat): > 2.03 mg/l
  - **Exposure time:** 4 h
  - **Test atmosphere:** dust/mist
  - **Method:** OECD Test Guideline 403
  - **Assessment:** The substance or mixture has no acute inhalation toxicity

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

#### Antimony, dialkyl dithiocarbamate:
- **Acute oral toxicity**
  - Acute toxicity estimate: 2,000 mg/kg
  - **Method:** Expert judgement
  - **Remarks:** Based on harmonised classification in EU regulation 1272/2008, Annex VI
  - LD50 (Rat): > 5,000 mg/kg

- **Acute inhalation toxicity**
  - Acute toxicity estimate: 5 mg/l
  - **Exposure time:** 4 h
  - **Test atmosphere:** dust/mist
  - **Method:** Expert judgement
  - **Remarks:** Based on harmonised classification in EU regulation 1272/2008, Annex VI

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

#### 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

Skin corrosion/irritation
Not classified based on available information.

Components:

Dilithium azelate:
Species: reconstructed human epidermis (RhE)
Method: OECD Test Guideline 439
Remarks: Based on data from similar materials
Result: No skin irritation

Boric acid:
Species: Rabbit
Result: No skin irritation

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

Serious eye damage/eye irritation
Not classified based on available information.

Components:

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

Boric acid:
Species: Rabbit
Result: No eye irritation

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

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.

Respiratory sensitisation
Not classified based on available information.
Components:

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

Boric acid:
- Test Type: Buehler Test
- Exposure routes: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative

2,5-Bis(octyldithio)-1,3,4-thiadiazole:
- Test Type: Buehler Test
- Exposure routes: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: positive
- Assessment: Probability or evidence of high skin sensitisation rate in humans

Germ cell mutagenicity
Not classified based on available information.

Components:

Dilithium azelate:
- 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

Boric acid:
- Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Test Type: In vitro mammalian cell gene mutation test  
Result: equivocal

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
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

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

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:
Quartz:
Species : Humans  
Application Route : inhalation (dust/mist/fume)
### Result:
**Remarks:** These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

### Carcinogenicity - Assessment:
**Remarks:** Positive evidence from human epidemiological studies (inhalation)

### Boric acid:

<table>
<thead>
<tr>
<th>Species</th>
<th>Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>Ingestion</td>
</tr>
<tr>
<td>Exposure time</td>
<td>103 weeks</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
</tbody>
</table>

### Reproductive toxicity

Not classified based on available information.

### Components:

#### Dilithium azelate:

<table>
<thead>
<tr>
<th>Effects on fertility</th>
<th>Test Type: Reproduction/Developmental toxicity screening test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>Application Route</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effects on foetal development</th>
<th>Test Type: Reproduction/Developmental toxicity screening test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>Application Route</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

#### Boric acid:

<table>
<thead>
<tr>
<th>Effects on fertility</th>
<th>Test Type: Three-generation reproduction toxicity study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>Application Route</td>
<td>Ingestion</td>
</tr>
<tr>
<td>Result</td>
<td>positive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effects on foetal development</th>
<th>Test Type: Embryo-foetal development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Application Route</td>
<td>Ingestion</td>
</tr>
<tr>
<td>Result</td>
<td>positive</td>
</tr>
</tbody>
</table>

### Reproductive toxicity - Assessment:

Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

### Antimony, dialkyl dithiocarbamate:

<table>
<thead>
<tr>
<th>Effects on fertility</th>
<th>Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test</th>
</tr>
</thead>
</table>

Result: positive

Remarks: Based on data from similar materials

Result: positive

Remarks: Based on data from similar experiments.
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development:
Species: Rat
Application Route: Ingestion
Result: negative

2,5-Bis(octyldithio)-1,3,4-thiadiazole:
Effects on fertility:
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development:
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Components:
Quartz:
Exposure routes: 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:
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

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.

Boric acid:
Species: Rat
NOAEL: 100 mg/kg
LOAEL: 334 mg/kg
Application Route: Ingestion
Exposure time: 2 yr

Antimony, dialkyl dithiocarbamate:
Species: Rat
NOAEL: >= 1,000 mg/kg
Application Route: Ingestion
Exposure time: 54 Days

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

Aspiration toxicity
Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

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
Quartz:

Ecotoxicology Assessment

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

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

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

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

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

Boric acid:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 74 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 102 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 52.4 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 : 35.4 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 6.4 mg/l
Exposure time: 34 d
Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 210

Toxicity to daphnia and other : NOEC: 10.8 mg/l
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

3000®

Version 5.0 Revision Date: 04.11.2020 SDS Number: 128242-00019 Date of last issue: 06.05.2020 Date of first issue: 20.05.2015

12.2 Persistence and degradability

Components:

Dilithium azelate:
Biodegradability: Result: Readily biodegradable. Biodegradation: 83 % Exposure time: 30 d

Antimony, dialkyl dithiocarbamate:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: 0.02 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity): 1

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

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

Biodegradability:
Result: Readily biodegradable. Biodegradation: 83 % Exposure time: 30 d

aquatic invertebrates (Chronic toxicity):
Exposure time: 21 d Species: Daphnia magna (Water flea)

Biodegradation: 83 % Exposure time: 30 d

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

Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201

Exposure time: 3 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 209

Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202

Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203

Exposure time: 21 d Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202

Exposure time: 21 d Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Exposure time: 21 d Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
12.3 Bioaccumulative potential

**Components:**

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

**Boric acid:**
- Bioaccumulation: Species: Cyprinus carpio (Carp)
  - Bioconcentration factor (BCF): \( \leq 3.2 \)
  - Method: OECD Test Guideline 305
- Partition coefficient: n-octanol/water: log Pow: -1.09

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

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not relevant

12.6 Other adverse effects
No data available

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods
- Product: Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

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

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Boric acid
REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable
Not applicable

Other regulations:
Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components 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.

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-Statements

- **H302**: Harmful if swallowed.
- **H315**: Causes skin irritation.
- **H317**: May cause an allergic skin reaction.
- **H332**: Harmful if inhaled.
- **H350i**: May cause cancer by inhalation.
- **H360FD**: May damage fertility. May damage the unborn child.
- **H372**: Causes damage to organs through prolonged or repeated exposure if inhaled.
- **H410**: Very toxic to aquatic life with long lasting effects.
- **H412**: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

- **Acute Tox.**: Acute toxicity
- **Aquatic Chronic**: Long-term (chronic) aquatic hazard
- **Carc.**: Carcinogenicity
- **Repr.**: Reproductive toxicity
- **Skin Irrit.**: Skin irritation
- **Skin Sens.**: Skin sensitisation
- **STOT RE**: Specific target organ toxicity - repeated exposure
- **2004/37/EC**: Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
- **GB EH40**: UK. EH40 WEL - Workplace Exposure Limits
- **2004/37/EC / TWA**: Long term exposure limit
- **GB EH40 / TWA**: Long-term exposure limit (8-hour TWA reference period)
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic Substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

<table>
<thead>
<tr>
<th>Property</th>
<th>Classification Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Sens. 1</td>
<td>H317 Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>H412 Calculation method</td>
</tr>
</tbody>
</table>

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 use.
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.

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