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

1.1 Product identifier

Trade name: WHITE COLLAR

SDS-Identcode: 301G

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
             75061, Irving, TX
             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; Internl: +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)

Eye irritation, Category 2: H319: Causes serious eye irritation.
Skin sensitisation, Category 1: H317: May cause an allergic skin reaction.
Short-term (acute) aquatic hazard, Category 1: H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1: H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms: ![Warning] 

Signal word: Warning 

Hazard statements: 
- H317 May cause an allergic skin reaction. 
- H319 Causes serious eye irritation. 
- H410 Very toxic to aquatic life with long lasting effects. 

Precautionary statements: 

**Prevention:**
- P273 Avoid release to the environment. 
- P280 Wear protective gloves/ eye protection/ face protection. 

**Response:**
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. 
- P337 + P313 If eye irritation persists: Get medical advice/ attention. 
- P362 + P364 Take off contaminated clothing and wash it before reuse. 
- P391 Collect spillage. 

Hazardous components which must be listed on the label: 
- Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) 
- Calcium petroleum sulfonates 

2.3 Other hazards 
None known. 

SECTION 3: Composition/information on ingredients 

3.2 Mixtures 

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>CAS-No. EC-No. Index-No. Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2 215-222-5 030-013-00-7</td>
<td>Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1</td>
<td>&gt;= 25 - &lt; 30</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8 215-138-9 01-2119475325-36</td>
<td>Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335</td>
<td></td>
<td>&gt;= 1 - 3</td>
</tr>
<tr>
<td>Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulpho-</td>
<td>Not Assigned</td>
<td>Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td></td>
<td>&gt;= 1 - 10</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 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.

4.2 Most important symptoms and effects, both acute and delayed

Risks: May cause an allergic skin reaction. Causes serious eye irritation.
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
Fluorine compounds
Sulphur 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.
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.

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
Occupational Exposure Limits
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.

<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>Talc</td>
<td>14807-96-6</td>
<td>TWA (Respirable dust)</td>
<td>1 mg/m3</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>TWA</td>
<td>2 mg/m3</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>1 mg/m3</td>
<td>2017/164/EU</td>
</tr>
<tr>
<td>Further information: Indicative</td>
<td></td>
<td>STEL (Respirable fraction)</td>
<td>4 mg/m3</td>
<td>2017/164/EU</td>
</tr>
<tr>
<td>Antimony, dialkyl dithiocarbamate</td>
<td>15890-25-2</td>
<td>TWA</td>
<td>0.5 mg/m3 (antimony)</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>TWA (Respirable dust)</td>
<td>0.1 mg/m3</td>
<td>2004/37/EC</td>
</tr>
<tr>
<td>Further information: Carcinogens or mutagens</td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>0.1 mg/m3 (Silica)</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Further information: Capable of causing cancer and/or heritable genetic damage.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.
### 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>Zinc oxide</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>0.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>83 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>2.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>83 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.83 mg/kg bw/day</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Acute local effects</td>
<td>4 mg/m³</td>
</tr>
<tr>
<td>Calcium bis(di C₈-C₁₀, branched, C₉ rich, alkynaphthalenesulphonate)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>70 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>10 mg/kg bw/day</td>
</tr>
<tr>
<td>Calcium petroleum sulfonates</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>11.75 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>3.33 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term local effects</td>
<td>1.03 mg/cm²</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>2.9 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>1.667 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term local effects</td>
<td>0.513 mg/cm²</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.8333 mg/kg bw/day</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>Zinc oxide</td>
<td>Fresh water</td>
<td>20.6 µg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>6.1 µg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>100 µg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>117.8 mg/kg dry weight</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>56.5 mg/kg dry</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Engineering measures
Minimize workplace exposure concentrations.

Personal protective equipment

Eye protection: Wear the following personal protective equipment:
- Safety goggles
- 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**

**Appearance**: Viscous semi-solid

**Colour**: Light grey

**Odour**: Petroleum

**Odour 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**: \(\geq 200\, ^\circ C\)

Method: ASTM D 92, Cleveland open cup Distillates (petroleum), hydrotreated heavy naphthenic

**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**: 1.3

**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, 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.

Components:

Zinc oxide:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 5.7 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   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

Calcium oxide:
   Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
      Method: OECD Test Guideline 425
   Acute inhalation toxicity: LC50 (Rat): > 5 mg/l
      Exposure time: 4 h
      Test atmosphere: dust/mist
      Method: OECD Test Guideline 436
      Remarks: Based on data from similar materials
   Acute dermal toxicity: 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

Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
   Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
   Acute dermal toxicity: LD50 (Rabbit): > 5,000 mg/kg

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

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

Acute inhalation toxicity: LC50 (Rat): > 1.9 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Assessment: The substance or mixture has no acute inhalation toxicity
   Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rabbit): > 4,000 mg/kg
   Assessment: The substance or mixture has no acute dermal toxicity

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

Skin corrosion/irritation
Not classified based on available information.

Components:

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

Calcium oxide:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation
Remarks: Based on data from similar materials

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

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

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:

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

**Calcium oxide:**
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irreversible effects on the eye
Remarks: Based on data from similar materials

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

**Calcium petroleum sulfonates:**
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation
Remarks: Based on data from similar materials

Respiratory or skin sensitisation

**Skin sensitisation**
May cause an allergic skin reaction.

**Respiratory sensitisation**
Not classified based on available information.

**Components:**

**Zinc oxide:**
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

**Calcium oxide:**
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

**Calcium bis(di C8-C10, branched, C9 rich, alkylnapthalenesulphonate):**
Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Result: positive
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

WHITE COLLAR

Remarks : Based on data from similar materials

Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

Calcium petroleum sulfonates:
Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

Germ cell mutagenicity
Not classified based on available information.

Components:

Zinc oxide:
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: equivocal

Test Type: Chromosome aberration test in vitro
Result: equivocal

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Result: positive

Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.
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

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

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 petroleum sulfonates:
Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Genotoxicity in vivo:
Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
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:
Zinc oxide:
Species: Mouse
Application Route: Ingestion
Exposure time: 1 Years
Result: negative
Remarks: Based on data from similar materials

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

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:
Zinc oxide:

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 foetal development:
Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 414

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

Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

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

**Effects on fertility**

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

**Effects on foetal development**

Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

**Antimony, dialkyl dithiocarbamate:**

**Effects on fertility**

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

**Effects on foetal development**

Species: Rat
Application Route: Ingestion
Result: negative

**Calcium petroleum sulfonates:**

**Effects on fertility**

Test Type: One-generation reproduction toxicity study
Species: Rat
SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

WHITE COLLAR

Version 5.0  Revision Date: 04.11.2020  SDS Number: 126513-00016  Date of last issue: 06.05.2020  Date of first issue: 19.05.2015

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:

Zinc oxide:
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

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:

Zinc oxide:
Species: Rat, male
NOAEL: 0.0015 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 3 Months
Method: OECD Test Guideline 413

Calcium oxide:
Species: Rat
NOAEL: >= 0.399 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 90 Days
Method: OECD Test Guideline 413

Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
Species: Rat
NOAEL: 100 mg/kg
LOAEL: 300 mg/kg
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12.1 Toxicity

Components:

**Zinc oxide:**

- **Toxicity to fish:** LC50: \( > 0.1 - 1 \text{ mg/l} \)
  - Exposure time: 96 h
  - Remarks: Based on data from similar materials

- **Toxicity to algae/aquatic plants:** ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.136 mg/l
  - Exposure time: 72 h
  - NOEC (Pseudokirchneriella subcapitata (green algae)): \( > 0.01 - 0.1 \text{ mg/l} \)
  - Exposure time: 72 h
  - Remarks: Based on data from similar materials

- **M-Factor (Acute aquatic toxicity):** 1
<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity to fish (Chronic toxicity)</th>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
<th>M-Factor (Chronic aquatic toxicity)</th>
<th>Calcium oxide:</th>
<th>Toxicity to algae/aquatic plants</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
<th>Calcium bis(di C8-C10, branched, C9 rich, alkyl naphthalenesulphonate):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOEC: &gt; 0.01 - 0.1 mg/l</td>
<td>NOEC: &gt; 0.01 - 0.1 mg/l</td>
<td>1</td>
<td>LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 100 mg/l</td>
<td>ErC50 (Pseudokirchneriella subcapitata (green algae)): &gt; 100 mg/l</td>
<td>EC50 : &gt; 100 mg/l</td>
<td>NOEC: &gt; 1 mg/l</td>
<td>LL50 (Cyprinus carpio (Carp)): &gt; 100 mg/l</td>
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<td></td>
<td>Exposure time: 14 Weeks</td>
<td>Exposure time: 7 d</td>
<td></td>
<td>Exposure time: 96 h</td>
<td>Exposure time: 72 h</td>
<td>Exposure time: 3 h</td>
<td>Exposure time: 14 d</td>
<td>Exposure time: 96 h</td>
</tr>
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<td></td>
<td>Remarks: Based on data from similar materials</td>
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</table>

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

**Toxicity to microorganisms:**
- EC50 : > 100 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209
  - Remarks: Based on data from similar materials
aquatic invertebrates

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 microorganisms

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOELR: 2.2 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211

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.

Calcium petroleum sulfonates:

Toxicity to fish

LL50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Toxicity to algae/aquatic plants:
- EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
  Exposure time: 72 h
  Test substance: Water Accommodated Fraction
  Remarks: Based on data from similar materials
- NOEC (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l
  Exposure time: 72 h
  Test substance: Water Accommodated Fraction
  Remarks: Based on data from similar materials

Toxicity to microorganisms:
- EC50: > 10,000 mg/l
  Exposure time: 3 h
  Method: OECD Test Guideline 209

Quartz:

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

12.2 Persistence and degradability

Components:

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):
- Biodegradability: Result: Not readily biodegradable.
  Remarks: Based on data from similar materials

Antimony, dialkyl dithiocarbamate:
- Biodegradability: Result: Not readily biodegradable.
  Biodegradation: 20 %
  Exposure time: 28 d

Calcium petroleum sulfonates:
- Biodegradability: Result: Not readily biodegradable.
  Biodegradation: 8.6 %
  Exposure time: 28 d
  Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

Components:

Zinc oxide:
- Bioaccumulation: Species: Oncorhynchus mykiss (rainbow trout)
  Bioconcentration factor (BCF): 78 - 2,060
Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate):
Partition coefficient: n-octanol/water: log Pow: > 6.6

Calcium petroleum sulfonates:
Partition coefficient: n-octanol/water: log Pow: > 6.65

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
ADN: UN 3077
ADR: UN 3077
RID: UN 3077
IMDG: UN 3077
IATA: UN 3077

14.2 UN proper shipping name
ADN: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
( Zinc oxide, Antimony, dialkyl dithiocarbamate)
ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Antimony, dialkyl dithiocarbamate)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Antimony, dialkyl dithiocarbamate)
IATA : Environmentally hazardous substance, solid, n.o.s. (Zinc oxide, Antimony, dialkyl dithiocarbamate)

14.3 Transport hazard class(es)

ADB : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADB
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

ADR
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)
Packing instruction (cargo aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

IATA (Passenger)
Packing instruction (passenger aircraft) : 956
14.5 Environmental hazards

**ADN**
Environmentally hazardous: yes

**ADR**
Environmentally hazardous: yes

**RID**
Environmentally hazardous: yes

**IMDG**
Marine pollutant: yes

**IATA (Passenger)**
Environmentally hazardous: yes

**IATA (Cargo)**
Environmentally hazardous: yes

14.6 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.

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

<table>
<thead>
<tr>
<th>Regulation Description</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).</td>
<td>Not applicable</td>
</tr>
<tr>
<td>REACH - List of substances subject to authorisation (Annex XIV)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Regulation (EU) 2019/1021 on persistent organic pollutants (recast)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL HAZARDS</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>100 t</td>
<td>200 t</td>
</tr>
</tbody>
</table>
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.
- **H318**: Causes serious eye damage.
- **H319**: Causes serious eye irritation.
- **H332**: Harmful if inhaled.
- **H335**: May cause respiratory irritation.
- **H350i**: May cause cancer by inhalation.
- **H372**: Causes serious eye irritation.
- **H400**: Very toxic to aquatic life.
- **H410**: Very toxic to aquatic life with long lasting effects.

**Full text of other abbreviations**

- **Acute Tox.**: Acute toxicity
- **Aquatic Acute**: Short-term (acute) aquatic hazard
- **Aquatic Chronic**: Long-term (chronic) aquatic hazard
- **Carc.**: Carcinogenicity
- **Eye Dam.**: Serious eye damage
- **Eye Irrit.**: Eye irritation
- **Skin Irrit.**: Skin irritation
- **Skin Sens.**: Skin sensitisation
- **STOT RE**: Specific target organ toxicity - repeated exposure
- **STOT SE**: Specific target organ toxicity - single 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
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; AIIIC - 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; IECS - 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: Classification procedure:
Eye Irrit. 2 H319 Calculation method
Skin Sens. 1 H317 Calculation method
Aquatic Acute 1 H400 Calculation method
Aquatic Chronic 1 H410 Calculation method

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.

GB / EN