SAFETY DATA SHEET

WHITE COLLAR PREMIUM

SECTION 1. IDENTIFICATION

Product name : WHITE COLLAR PREMIUM
Other means of identification : No data available
SDS-Identcode : 301G

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

Recommended use of the chemical and restrictions on use
Recommended use : Industrial use
                   Thread Compound (Pipe Dope) and Jacking grease for use in
                   Offshore industries
                   Mining, (without offshore industries)
Restrictions on use : Do not use on oxygen lines or in oxygen enriched atmos-
                    pheres.

SECTION 2. HAZARDS IDENTIFICATION

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

GHS label elements
Hazard pictograms : ![Hazard Pictogram]
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 protec-
                           tion.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P337 + P313 If eye irritation persists: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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 naphthenic</td>
<td>64742-52-5</td>
<td>&gt;= 30 - &lt; 60 *</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>&gt;= 10 - &lt; 30 *</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>&gt;= 5 - &lt; 10 *</td>
</tr>
<tr>
<td>12-Hydroxy lithium stearate</td>
<td>7620-77-1</td>
<td>&gt;= 1 - &lt; 5 *</td>
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<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>&gt;= 1 - &lt; 5 *</td>
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<td>Calcium bis(di C8-C10, branched, C9 rich, alkynaphthalenesulphonate)</td>
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<td>&gt;= 1 - &lt; 5 *</td>
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<tr>
<td>Quartz</td>
<td>14808-60-7</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.
**SAFETY DATA SHEET**

**WHITE COLLAR PREMIUM**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
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<td>120067-00016</td>
<td>05/06/2020</td>
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</table>

- 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
- Fluorine compounds
- 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 spills 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.
SAFETY DATA SHEET

WHITE COLLAR PREMIUM

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

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
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<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>CA AB OEL</td>
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<td>STEV (Mist)</td>
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<td></td>
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<tr>
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<td>TWA (Respirable)</td>
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<td>TWA (Respirable)</td>
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<td>TWA (Respirable fraction)</td>
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<td></td>
<td>TWA (Respirable particulate matter)</td>
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<td>12-Hydroxy lithium stearate</td>
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<td></td>
<td>TWA (Inhalable particulate matter)</td>
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<td>TWA (Respirable particulate matter)</td>
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<td>2 mg/m³</td>
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<td>TWA (Respirable particulates)</td>
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<td>CA QC OEL</td>
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<td>TWA</td>
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<td>0.025 mg/m³ (Silica)</td>
<td>ACGIH</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**

light gray

**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 : >= 200 °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
Vapor pressure : Not applicable
Relative vapor density : Not applicable
Relative density : 1.3
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
SAFETY DATA SHEET

WHITE COLLAR PREMIUM

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

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Components:

**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

**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

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

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

Calcium oxide:
Acute oral toxicity : LD50 (Rat): $> 2,000$ mg/kg
Method: OECD Test Guideline 425
Acute inhalation toxicity : (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, alkylnaphthalenesulphonate):
Acute oral toxicity : LD50 (Rat): $> 5,000$ mg/kg

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

Skin corrosion/irritation
Not classified based on available information.

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

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

Talc:
Species : Rabbit
Result : No skin irritation
12-Hydroxy lithium stearate:

- **Species**: Rabbit
- **Result**: No skin irritation
- **Remarks**: Based on data from similar materials

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, alkynaphthalenesulphonate):

- **Species**: Rabbit
- **Result**: Skin irritation
- **Remarks**: Based on data from similar materials

---

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

12-Hydroxy lithium stearate:

- **Species**: Rabbit
- **Result**: No eye irritation
- **Remarks**: Based on data from similar materials

Zinc oxide:

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

Talc:

- **Species**: Rabbit
- **Result**: No eye irritation

12-Hydroxy lithium stearate:

- **Species**: Rabbit
- **Result**: No eye irritation
- **Remarks**: Based on data from similar materials

Calcium oxide:

- **Species**: Rabbit
- **Result**: Irreversible effects on the eye
- **Method**: OECD Test Guideline 405

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
Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Components:

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

**Zinc oxide:**
- **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

**12-Hydroxy lithium stearate:**
- **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

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

**Germ cell mutagenicity**
Not classified based on available information.

### Components:

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

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

#### 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 -
Weight of evidence does not support classification as a germ
Assessment cell mutagen.

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

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

Calcium 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, alkylnaphthalenesulphonate):
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

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

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

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 naphthenic:**
- **Species:** Mouse
- **Application Route:** Skin contact
- **Exposure time:** 78 weeks
- **Method:** OECD Test Guideline 451
- **Result:** negative

**Zinc oxide:**
- **Species:** Mouse
- **Application Route:** Ingestion
- **Exposure time:** 1 Year
- **Result:** negative
- **Remarks:** Based on data from similar materials

**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

**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 fetal development:** Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

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

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

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

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

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.

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

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 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

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

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

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, alkylnaphthalenesulphonate):

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

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.

**Aspiration toxicity**

Not classified based on available information.

### SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

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

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

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

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

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

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

**Zinc oxide:**

- **Toxicity to fish**: LC50: > 0.1 - 1 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 mg/l
  - Exposure time: 72 h
  - Remarks: Based on data from similar materials

### Toxicity to fish (Chronic toxicity)

- **NOEC** *(Jordanella floridae (flagfish))*: > 0.01 - 0.1 mg/l
  - Exposure time: 14 Weeks
  - Remarks: Based on data from similar materials

### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

- **NOEC** *(Ceriodaphnia dubia (water flea))*: > 0.01 - 0.1 mg/l
  - Exposure time: 7 d
  - Remarks: Based on data from similar materials

### Talc:

- **LC50** *(Brachydanio rerio (zebrafish))*: > 100,000 mg/l
  - Exposure time: 24 h

### 12-Hydroxy lithium stearate:

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

- **EL50** *(Daphnia magna (Water flea))*: > 100 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

- **NOELR** *(Pseudokirchneriella subcapitata (green algae))*: > 100 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

### 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

- **EC50** *(Daphnia magna (Water flea))*: > 100 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 202
  - Remarks: Based on data from similar materials

- **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 daphnia and other aquatic invertebrates (Chronic toxicity):

EC10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Crangon crangon (shrimp)): > 1 mg/l
Exposure time: 14 d
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

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
Quartz:

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

Persistence and degradability

Components:
- Distillates (petroleum), hydrotreated heavy naphthenic:
  - Biodegradability: Result: Not readily biodegradable.
  - Biodegradation: 2 - 4 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301B

12-Hydroxy lithium stearate:
- Biodegradability: Result: Readily biodegradable.
- Biodegradation: 78 %
- Exposure time: 28 d
- Method: OECD Test Guideline 301C

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

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

Mobility in soil
- No data available

Other adverse effects
- No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Antimony, dialkyl dithiocarbamate)
Class : 9
Packing group : III
Labels : 9

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

IMDG-Code
UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Antimony, dialkyl dithiocarbamate)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Domestic regulation

TDG
UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Antimony, dialkyl dithiocarbamate)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant: yes (Zinc oxide, Antimony, dialkyl dithiocarbamate)

**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
- **ACGIH / STEL**: Short-term exposure limit
- **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 BC OEL / STEL**: short-term exposure limit
- **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

AICL - 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; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System


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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