# 72733

| Version | Revision Date: | SDS Number: | Date of last issue: 01.10.2018 |
|---|---|---|---|
| 11.2 | 11.10.2018 | 117144-00020 | Date of first issue: 12.05.2015 |

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

### 1.1 Product identifier

Trade name : 72733

SDS-Identcode : 463G

### 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<br>2777 N. Stemmons Frwy<br>DALLAS, TX 75207, | INTERTEK FRANCE<br>27400 HEUDEBOUVILLE<br>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; Interntnl: +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)**

| | |
|---|---|
| Reproductive toxicity, Category 1A | H360FD: May damage fertility. May damage the unborn child. |
| Effects on or via lactation | H362: May cause harm to breast-fed children. |
| Specific target organ toxicity - repeated exposure, Category 1 | H372: Causes damage to organs through prolonged or repeated exposure. |
| 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 :

Signal word : Danger

Hazard statements : H360FD May damage fertility. May damage the unborn child.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**

P201 Obtain special instructions before use.
P263 Avoid contact during pregnancy and while nursing.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Hazardous components which must be listed on the label:
Lead

**Additional Labelling**

EUH208 Contains Calcium petroleum sulfonates. May produce an allergic reaction.
Restricted to professional users.

### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Lead | 7439-92-1<br>231-100-4<br>082-013-00-1<br>01-2119513221-59 | Repr. 1A; H360FD<br>Lact.H362<br>STOT RE 1; H372<br>Aquatic Acute 1; H400 | >= 30 - < 50 |

| | | | |
|---|---|---|---|
| | | Aquatic Chronic 1; H410 | |
| Zinc | 7440-66-6<br>231-175-3<br>030-001-01-9<br>01-2119467174-37 | Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410 | >= 10 - < 20 |
| Copper metal powder | 7440-50-8<br>231-159-6<br>01-2119480154-42 | Flam. Sol. 1; H228<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410 | >= 2.5 - < 10 |
| Quartz | 14808-60-7<br>238-878-4 | STOT RE 1; H372 | >= 1 - < 10 |
| Barium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulpho-nate) | Not Assigned<br><br>056-002-00-7<br>01-2119980986-14 | Acute Tox. 4; H302<br>Acute Tox. 4; H332<br>Skin Irrit. 2; H315 | >= 1 - < 10 |
| Zinc oxide | 1314-13-2<br>215-222-5<br>030-013-00-7 | Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410 | >= 0.25 - < 1 |
| Calcium petroleum sulfonates | 61789-86-4<br>263-093-9 | Skin Sens. 1B; H317 | >= 0.1 - < 1 |

For explanation of abbreviations see section 16.

## 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.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

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 : 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.
Rinse mouth thoroughly with water.

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

Risks : May damage fertility. May damage the unborn child.
May cause harm to breast-fed children.
Causes damage to organs through prolonged or repeated exposure.

May produce an allergic 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 fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Lead compounds
Metal oxides
Silicon oxides
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 and personal protective equip-

ment recommendations.

### 6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.
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 : Do not get on skin or clothing.
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
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. 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 locked up. Keep tightly closed. Store in accordance with the particular national regulations.

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

### 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**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Lead | 7439-92-1 | TWA | 0.15 mg/m3 (Lead) | 98/24/EC I |
| Further information | Binding | | | |
| Graphite | 7782-42-5 | TWA (inhalable dust) | 10 mg/m3 | GB EH40 |
| 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., 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 MDHS14/3., 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 should be used | | | |
| | | TWA (Respirable dust) | 4 mg/m3 | GB EH40 |
| 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., 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 MDHS14/3., 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 should be used | | | |
| Copper metal powder | 7440-50-8 | TWA (Fumes) | 0.2 mg/m3 (Copper) | GB EH40 |
| | | TWA (Dusts and mists) | 1 mg/m3 (Copper) | GB EH40 |
| | | STEL (Dusts and mists) | 2 mg/m3 (Copper) | GB EH40 |
| Talc | 14807-96-6 | TWA (Respirable dust) | 1 mg/m3 | GB EH40 |
| 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., 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 MDHS14/3., 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 should be used | | | |
| Quartz | 14808-60-7 | TWA (Respirable dust) | 0.1 mg/m3 (Silica) | GB EH40 |
| 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., 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 MDHS14/3., 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 should be used | | | |
| Barium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate) | Not Assigned | TWA | 0.5 mg/m3 (Barium) | 2006/15/EC |
| Further information | Indicative | | | |
| | | TWA | 0.5 mg/m3 (Barium) | GB EH40 |
| Further information | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used | | | |

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

Quartz

**Biological occupational exposure limits**

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|---|---|---|---|---|
| Lead | 7439-92-1 | Lead (Lead): 40 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 50 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 30 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 50 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 60 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 25 µg/dl (Blood) | | GB EH40 BAT |
| | | Lead (Lead): 0.7 mg/l (Blood) | | 98/24/EC II |

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

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Graphite | Consumers | Inhalation | Long-term local effects | 0.3 mg/m3 |
| | Consumers | Ingestion | Long-term systemic effects | 813 mg/kg bw/day |
| | Workers | Inhalation | Long-term local effects | 1.2 mg/m3 |
| Zinc | Workers | Inhalation | Long-term systemic effects | 5 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 83 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 2.5 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 83 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0.83 mg/kg bw/day |
| Copper metal powder | Workers | Inhalation | Acute systemic effects | 20 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 137 mg/kg bw/day |
| | Workers | Skin contact | Acute systemic effects | 237 mg/kg bw/day |
| | Consumers | Inhalation | Acute systemic effects | 20 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 1 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 1 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 137 mg/kg bw/day |
| | Consumers | Skin contact | Acute systemic effects | 273 mg/kg bw/day |
| Zinc oxide | Workers | Inhalation | Long-term systemic effects | 5 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 0.5 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 83 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 2.5 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 83 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0.83 mg/kg bw/day |
| Calcium petroleum sulfonates | Workers | Inhalation | Long-term systemic effects | 11.75 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 3.33 mg/kg bw/day |
| | Workers | Skin contact | Long-term local effects | 1.03 mg/cm2 |
| | Consumers | Inhalation | Long-term systemic effects | 2.9 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 1.667 mg/kg bw/day |

| | | | | |
|---|---|---|---|---|
| | Consumers | Skin contact | Long-term local effects | 0.513 mg/cm2 |
| | Consumers | Ingestion | Long-term systemic effects | 0.8333 mg/kg bw/day |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Lead | Fresh water | 6.5 µg/l |
| | Marine water | 3.4 µg/l |
| | Sewage treatment plant | 100 µg/l |
| | Fresh water sediment | 174 mg/kg |
| | Marine sediment | 164 mg/kg |
| | Soil | 147 mg/kg |
| | Oral (Secondary Poisoning) | 10.9 mg/kg food |
| Zinc | Fresh water | 20.6 µg/l |
| | Marine water | 6.1 µg/l |
| | Sewage treatment plant | 100 µg/l |
| | Fresh water sediment | 117.8 mg/kg |
| | Marine sediment | 56.5 mg/kg |
| | Soil | 35.6 mg/kg |
| Copper metal powder | Fresh water | 7.8 µg/l |
| | Marine water | 5.2 µg/l |
| | Sewage treatment plant | 230 µg/l |
| | Fresh water sediment | 87 mg/kg |
| | Marine sediment | 676 mg/kg |
| | Soil | 65 mg/kg |
| Distillates (petroleum), hydrotreated light naphthenic | Oral (Secondary Poisoning) | 9.33 mg/kg food |
| Zinc oxide | Fresh water | 20.6 µg/l |
| | Marine water | 6.1 µg/l |
| | Sewage treatment plant | 100 µg/l |
| | Fresh water sediment | 117.8 mg/kg dry weight (d.w.) |
| | Marine sediment | 56.5 mg/kg dry weight (d.w.) |
| | Soil | 35.6 mg/kg dry weight (d.w.) |
| Calcium petroleum sulfonates | Fresh water | 1 mg/l |
| | Marine water | 1 mg/l |
| | Intermittent use/release | 10 mg/l |
| | Sewage treatment plant | 1000 mg/l |
| | Fresh water sediment | 226000000 mg/kg |
| | Marine sediment | 226000000 mg/kg |
| | Soil | 271000000 mg/kg |
| | Oral (Secondary Poisoning) | 16.667 mg/kg food |

### 8.2 Exposure controls

**Engineering measures**

Minimize workplace exposure concentrations.

**Personal protective equipment**

| | | |
|---|---|---|
| Eye protection | : | Wear the following personal protective equipment:<br>Safety glasses |
| 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.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. |
| 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 | : | black, copper |
| 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 | : | >= 162.8 °C<br>Method: ASTM D 92, Cleveland open cup<br>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 | : | 1.9 |
| 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.

**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:**

**Lead:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials

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

**Zinc:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.41 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

**Copper metal powder:**

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436

Assessment: The substance or mixture has no acute inhalation toxicity

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

**Quartz:**

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

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

Acute oral toxicity : LD50 (Rat): 1,750 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : Acute toxicity estimate: 1.5 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 (Rat): > 10,000 mg/kg
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

**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

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Lead:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |
| Remarks | : | Based on data from similar materials |

**Copper metal powder:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |

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

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

**Zinc oxide:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |

**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**

Not classified based on available information.

**Components:**

**Lead:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |
| Remarks | : | Based on data from similar materials |

**Zinc:**

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

**Copper metal powder:**

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

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

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

**Zinc oxide:**

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

**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**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**Lead:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Copper metal powder:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

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

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Exposure routes | : | Skin contact |

| | | |
|---|---|---|
| Species | : | Guinea pig |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Zinc oxide:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**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:**

**Lead:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: In vitro sister chromatid exchange assay in mammalian cells<br>Result: negative<br>Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Rat<br>Application Route: Ingestion<br>Result: positive<br>Remarks: Based on data from similar materials |

**Zinc:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: positive<br>Remarks: Based on data from similar materials<br><br>Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative<br>Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) |

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

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

**Copper metal powder:**

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
Method: Directive 67/548/EEC, Annex V, B.12.
Result: negative
Remarks: Based on data from similar materials

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

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

**Zinc oxide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: positive

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: equivocal

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

Test Type: Chromosome aberration test in vitro
Result: positive

Test Type: in vitro micronucleus test
Result: positive

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

Test Type: In vitro sister chromatid exchange assay in mammalian cells
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 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:**

**Quartz:**

Species : Humans
Application Route : inhalation (dust/mist/fume)

| | | |
|---|---|---|
| Result | : | positive |
| Remarks | : | IARC: (International Agency for Research on Cancer)<br>These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard. |

**Zinc oxide:**

| | | |
|---|---|---|
| Species | : | Mouse |
| Application Route | : | Ingestion |
| Exposure time | : | 1 Years |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Reproductive toxicity**

May damage fertility. May damage the unborn child.
May cause harm to breast-fed children.

**Components:**

**Lead:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Mouse<br>Application Route: Ingestion<br>Result: positive<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: positive<br>Remarks: Based on data from similar materials |
| Reproductive toxicity - Assessment | : | Positive evidence of adverse effects on sexual function and fertility from human epidemiological studies., Positive evidence of adverse effects on development from human epidemiological studies., Studies indicating a hazard to babies during the lactation period |

**Copper metal powder:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rabbit<br>Application Route: Ingestion<br>Result: negative |

**Barium 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 : 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

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

**Calcium petroleum sulfonates:**

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative
Remarks: Based on data from similar materials

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Components:**

**Lead:**

Target Organs : Kidney, Central nervous system, Blood
Assessment : Causes damage to organs through prolonged or repeated exposure.

**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. |

**Zinc oxide:**

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

**Repeated dose toxicity**

**Components:**

**Lead:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 0.0015 mg/kg |
| LOAEL | : | 0.005 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 6 - 12 Months |
| Remarks | : | Based on data from similar materials |

**Zinc:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 31 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |

**Copper metal powder:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | >= 2 mg/m3 |
| Application Route | : | inhalation (dust/mist/fume) |
| Exposure time | : | 28 Days |

**Quartz:**

| | | |
|---|---|---|
| Species | : | Humans |
| LOAEL | : | 0.053 mg/m3 |
| Application Route | : | inhalation (dust/mist/fume) |
| Remarks | : | These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard. |

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

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 55 mg/kg |
| LOAEL | : | 165 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 29 Days |
| Method | : | OECD Test Guideline 422 |
| 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 |

**Calcium petroleum sulfonates:**

| | | |
|---|---|---|
| Species | : | Rat |
| | : | > 1000 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 28 Days |
| Method | : | OECD Test Guideline 410 |
| Remarks | : | Based on data from similar materials |

**Aspiration toxicity**

Not classified based on available information.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Lead:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 0.107 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Ceriodaphnia dubia (water flea)): 0.029 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.025 mg/l<br>Exposure time: 72 h<br><br>EC10 (Pseudokirchneriella subcapitata (green algae)): 6.1 µg/l<br>Exposure time: 72 h |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | EC10: 20 µg/l<br>Exposure time: 30 d<br>Species: Pimephales promelas (fathead minnow) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | EC10: 1.7 µg/l<br>Exposure time: 7 d<br>Species: Ceriodaphnia dubia (water flea) |
| M-Factor (Chronic aquatic toxicity) | : | 10 |

**Zinc:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 0.78 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 1.83 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | : | IC50 (Pseudokirchneriella subcapitata (green algae)): 0.15 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| M-Factor (Acute aquatic toxicity) | : | 1 |
| Toxicity to microorganisms | : | EC50 : 5.2 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0.199 mg/l<br>Exposure time: 30 d<br>Species: Oncorhynchus mykiss (rainbow trout) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0.1 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

**Copper metal powder:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 : > 10 - 100 µg/l<br>Exposure time: 96 h |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: > 1 - 10 µg/l |
| M-Factor (Chronic aquatic toxicity) | : | 10 |

**Quartz:**

**Ecotoxicology Assessment**

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

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

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Cyprinus carpio (Carp)): > 100 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>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 : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 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 : EC50 : > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

**Zinc oxide:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.1 - 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.01 - 0.1 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 0.1 - 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

NOEC (Selenastrum capricornutum (green algae)): > 0.001 - 0.01 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: > 0.01 - 0.1 mg/l
Exposure time: 25 d
Species: Oncorhynchus mykiss (rainbow trout)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.01 - 0.1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic : 10

toxicity)

**Calcium petroleum sulfonates:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1,000 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC50 : > 10,000 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |

### 12.2 Persistence and degradability

**Components:**

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

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Biodegradation: 14 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301B<br>Remarks: Based on data from similar materials |

**Calcium petroleum sulfonates:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Biodegradation: 8.6 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F |

### 12.3 Bioaccumulative potential

**Components:**

**Zinc:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Fish |

Bioconcentration factor (BCF): 177

**Zinc oxide:**

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 78 - 2,060

**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.
(Lead, Copper metal powder)

| | | |
|---|---|---|
| **ADR** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(Lead, Copper metal powder) |
| **RID** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(Lead, Copper metal powder) |
| **IMDG** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(Lead, Copper metal powder) |
| **IATA** | : | Environmentally hazardous substance, solid, n.o.s.<br>(Lead, Copper metal powder) |

**14.3 Transport hazard class(es)**

| | | |
|---|---|---|
| **ADN** | : | 9 |
| **ADR** | : | 9 |
| **RID** | : | 9 |
| **IMDG** | : | 9 |
| **IATA** | : | 9 |

**14.4 Packing group**

**ADN**

| | | |
|---|---|---|
| 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 |
| Packing instruction (LQ) | : | Y956 |
| Packing group | : | III |
| Labels | : | Miscellaneous |

**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**

| | | |
|---|---|---|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Lead |
| 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 (EC) No 850/2004 on persistent organic pollutants | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Lead |
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered: Lead (Number on list 30) |

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
E1 ENVIRONMENTAL

**Other regulations:**

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
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**

| | | |
|---|---|---|
| H228 | : | Flammable solid. |
| H302 | : | Harmful if swallowed. |
| H315 | : | Causes skin irritation. |
| H317 | : | May cause an allergic skin reaction. |
| H332 | : | Harmful if inhaled. |
| H360FD | : | May damage fertility. May damage the unborn child. |
| H362 | : | May cause harm to breast-fed children. |
| H372 | : | Causes damage to organs through prolonged or repeated exposure. |
| H372 | : | Causes damage to organs through prolonged or repeated exposure if inhaled. |
| 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 |
| Flam. Sol. | : | Flammable solids |
| Lact. | : | Effects on or via lactation |
| Repr. | : | Reproductive toxicity |
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| STOT RE | : | Specific target organ toxicity - repeated exposure |
| 2006/15/EC | : | Europe. Indicative occupational exposure limit values |

| | | |
|---|---|---|
| 98/24/EC I | : | Europe. Chemical Agents Directive - Annex I: Binding occupational exposure limit values |
| 98/24/EC II | : | Chemical Agents Directive - Annex II: Binding biological limit values |
| GB EH40 | : | UK. EH40 WEL - Workplace Exposure Limits |
| GB EH40 BAT | : | UK. Biological monitoring guidance values |
| 2006/15/EC / TWA | : | Limit Value - eight hours |
| 98/24/EC I / TWA | : | Occupational Exposure Limit Value |
| GB EH40 / TWA | : | Long-term exposure limit (8-hour TWA reference period) |
| GB EH40 / STEL | : | Short-term exposure limit (15-minute 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; AICS - Australian Inventory of Chemical Substances; 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**

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|---|---|---|
| Sources of key data used to compile the Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/ |

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Repr. 1A | H360FD | Calculation method |
| Lact. | H362 | Calculation method |

| | | |
|---|---|---|
| STOT RE 1 | H372 | Calculation method |
| Aquatic Acute 1 | H400 | Calculation method |
| Aquatic Chronic 1 | H410 | Calculation method |

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.

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