

Epiroc Chisel paste

Epiroc Sweden AB

Chemwatch: 5324-37

Version No: 4.1.1.1

Safety Data Sheet (Conforms to Regulation (EU) No 2015/830)

Issue Date: 03/07/2019

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L.REACH.SWE.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product Identifier

| | |
|-------------------------------|--|
| Product name | Epiroc Chisel paste |
| Synonyms | PN 3362122801 |
| Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains copper) |
| Other means of identification | 0017200013, 3362263900, 3363091200, 3363117818 |

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

| | |
|--------------------------|----------------|
| Relevant identified uses | Grease |
| Uses advised against | Not Applicable |

1.3. Details of the supplier of the safety data sheet

| | | |
|-------------------------|--------------------------------------|--|
| Registered company name | Epiroc Sweden AB | Construction Tools GmbH |
| Address | Sjöbodavägen 9 Norsborg 14553 Sweden | Helenenstrasse 149 Essen 45143 Germany |
| Telephone | +46 (0)20-78 44 55 | +49 201 633 0 |
| Fax | Not Available | Not Available |
| Website | www.epiroc.com/sds | www.epiroc.com/sds |
| Email | rder@atlascope.com | info.lubricants.hat@epiroc.com |

1.4. Emergency telephone number

| | |
|-----------------------------------|------------------------------|
| Association / Organisation | CHEMWATCH EMERGENCY RESPONSE |
| Emergency telephone numbers | +46 8 446 824 11 |
| Other emergency telephone numbers | +46 20 075 33 73 |


Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

| | |
|--|--|
| Classification according to regulation (EC) No 1272/2008 [CLP] [1] | H410 - Chronic Aquatic Hazard Category 1 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

2.2. Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| SIGNAL WORD | WARNING |

Hazard statement(s)

| | |
|-------------|---|
| H410 | Very toxic to aquatic life with long lasting effects. |
|-------------|---|

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

| | |
|-------------|-----------------------------------|
| P273 | Avoid release to the environment. |
|-------------|-----------------------------------|

Precautionary statement(s) Response

| | |
|-------------|-------------------|
| P391 | Collect spillage. |
|-------------|-------------------|

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

| | |
|-------------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|-------------|--|

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**3.1. Substances**

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

| 1.CAS No 2.EC No 3.Index No 4.REACH No | %[weight] | Name | Classification according to regulation (EC) No 1272/2008 [CLP] |
|--|-----------|---------------|---|
| 1.7440-50-8 2.231-159-6 3.Not Available 4.01-2119480154-42-XXXX | 2.5-<10 | <u>copper</u> | Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 3; H400, H412 ^[1] |

Legend:

1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available

SECTION 4 FIRST AID MEASURES**4.1. Description of first aid measures**

| | |
|---------------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. |

- ▶ Observe the patient carefully.
- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- ▶ Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

for copper intoxication:

- ▶ Unless extensive vomiting has occurred empty the stomach by lavage with water, milk, sodium bicarbonate solution or a 0.1% solution of potassium ferrocyanide (the resulting copper ferrocyanide is insoluble).
- ▶ Administer egg white and other demulcents.
- ▶ Maintain electrolyte and fluid balances.
- ▶ Morphine or meperidine (Demerol) may be necessary for control of pain.
- ▶ If symptoms persist or intensify (especially circulatory collapse or cerebral disturbances, try BAL intramuscularly or penicillamine in accordance with the supplier's recommendations.
- ▶ Treat shock vigorously with blood transfusions and perhaps vasopressor amines.
- ▶ If intravascular haemolysis becomes evident protect the kidneys by maintaining a diuresis with mannitol and perhaps by alkalinising the urine with sodium bicarbonate.
- ▶ It is unlikely that methylene blue would be effective against the occasional methaemoglobinemia and it might exacerbate the subsequent haemolytic episode.
- ▶ Institute measures for impending renal and hepatic failure.

[GOSSELIN, SMITH & HODGE: Commercial Toxicology of Commercial Products]

- ▶ A role for activated charcoals for emesis is, as yet, unproven.
- ▶ In severe poisoning CaNa₂EDTA has been proposed.

[ELLENHORN & BARCELOUX: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

5.2. Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | <ul style="list-style-type: none"> ▶ Reacts with acids producing flammable / explosive hydrogen (H₂) gas ▶ Avoid reaction with oxidising agents |
|-----------------------------|--|

5.3. Advice for firefighters

| | |
|------------------------------|--|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ The material is not readily combustible under normal conditions. ▶ However, it will break down under fire conditions and the organic component may burn. ▶ Not considered to be a significant fire risk. ▶ Heat may cause expansion or decomposition with violent rupture of containers. <p>Decomposes on heating and produces toxic fumes of: carbon dioxide (CO₂) sulfur oxides (SO_x) other pyrolysis products typical of burning organic material.</p> |

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

| | |
|---------------------|--|
| Minor Spills | <p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> ▶ Clean up all spills immediately. |
|---------------------|--|

| | |
|---------------------|--|
| | <ul style="list-style-type: none"> ▶ Avoid contact with skin and eyes. ▶ Wear impervious gloves and safety goggles. ▶ Trowel up/scrape up. |
| Major Spills | <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course. <p>Environmental hazard - contain spillage.</p> |

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

| | |
|--------------------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. |
| Fire and explosion protection | See section 5 |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry, well-ventilated area. ▶ Store away from incompatible materials and foodstuff containers. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Packing as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | ▶ Avoid reaction with oxidising agents |

7.3. Specific end use(s)

See section 1.2

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

| Ingredient | DNELs Exposure Pattern Worker | PNECs Compartment |
|------------|--|--|
| copper | Dermal 137 mg/kg bw/day (Systemic, Chronic) Dermal 273 mg/kg bw/day (Systemic, Acute) <i>Dermal 137 mg/kg bw/day (Systemic, Chronic) *</i> <i>Oral 0.041 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 1 mg/m³ (Local, Chronic) *</i> <i>Dermal 273 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 1 mg/m³ (Local, Acute) *</i> | 7.8 µg/L (Water (Fresh)) 5.2 µg/L (Water - Intermittent release) 87 mg/kg sediment dw (Sediment (Fresh Water)) 676 mg/kg sediment dw (Sediment (Marine)) 65 mg/kg soil dw (Soil) 230 µg/L (STP) |

* Values for General Population

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|------------|---|-----------------------|---------------|---------------|---------------|
| Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English) | copper | Copper* and inorganic compounds (as Cu) - respirable dust | 0,2 mg/m ³ | Not Available | Not Available | Not Available |
| Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English) | copper | Copper* and inorganic compounds (as Cu) - total dust | 1 mg/m ³ | Not Available | Not Available | Not Available |

EMERGENCY LIMITS


Epiroc Chisel paste

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|------------|---------------|---------|----------|-----------|
| copper | Copper | 3 mg/m3 | 33 mg/m3 | 200 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|------------|---------------|---------------|
| copper | 100 mg/m3 | Not Available |

MATERIAL DATA

8.2. Exposure controls

| | |
|--|--|
| 8.2.1. Appropriate engineering controls | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p> |
| 8.2.2. Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream. |

Respiratory protection

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

8.2.3. Environmental exposure controls

See section 12

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | | |
|---|---|--|----------------|
| Appearance | Copper coloured paste with characteristic odour | | |
| Physical state | Non Slump Paste | Relative density (Water = 1) | 1.2 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Applicable |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Applicable | Taste | Not Available |

Epiroc Chisel paste

| | | | |
|---------------------------|----------------|----------------------------------|----------------|
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Applicable | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Applicable | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | 0.05 @ 20C | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (1%) | Not Applicable |
| Vapour density (Air = 1) | Not Available | VOC g/L | 0 |

9.2. Other information

Not Available

SECTION 10 STABILITY AND REACTIVITY

| | |
|--|--|
| 10.1.Reactivity | See section 7.2 |
| 10.2. Chemical stability | <ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |
| 10.3. Possibility of hazardous reactions | See section 7.2 |
| 10.4. Conditions to avoid | See section 7.2 |
| 10.5. Incompatible materials | See section 7.2 |
| 10.6. Hazardous decomposition products | See section 5.3 |

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

| | |
|--------------|---|
| Inhaled | The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Copper poisoning following exposure to copper dusts and fume may result in headache, cold sweat and weak pulse. Capillary, kidney, liver and brain damage are the longer term manifestations of such poisoning. Inhalation of freshly formed metal oxide particles sized below 1.5 microns and generally between 0.02 to 0.05 microns may result in "metal fume fever". Symptoms may be delayed for up to 12 hours and begin with the sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. |
| Ingestion | The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Considered an unlikely route of entry in commercial/industrial environments |
| Skin Contact | Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Exposure to copper, by skin, has come from its use in pigments, ointments, ornaments, jewellery, dental amalgams and IUDs and as an antifungal agent and an algicide. Although copper algicides are used in the treatment of water in swimming pools and reservoirs, there are no reports of toxicity from these applications. Reports of allergic contact dermatitis following contact with copper and its salts have appeared in the literature, however the exposure concentrations leading to any effect have been poorly characterised. In one study, patch testing of 1190 eczema patients found that only 13 (1.1%) cross-reacted with 2% copper sulfate in petrolatum. Open cuts, abraded or irritated skin should not be exposed to this material |
| Eye | Copper salts, in contact with the eye, may produce conjunctivitis or even ulceration and turbidity of the cornea. |
| Chronic | Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course. |

| | | |
|---------------------|---|--|
| Epiroc Chisel paste | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| | | |
| copper | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] |
| | Inhalation (rat) LC50: 0.733 mg/l4 h ^[1] | Skin: no adverse effect observed (not irritating) ^[1] |
| | Oral (rat) LD50: 300-500 mg/kg ^[1] | |

Epiroc Chisel paste

| | |
|----------------|---|
| Legend: | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |
|----------------|---|

| | |
|---------------|--|
| COPPER | <p>WARNING: Inhalation of high concentrations of copper fume may cause "metal fume fever", an acute industrial disease of short duration. Symptoms are tiredness, influenza like respiratory tract irritation with fever. for copper and its compounds (typically copper chloride):</p> <p>Acute toxicity: There are no reliable acute oral toxicity results available. In an acute dermal toxicity study (OECD TG 402), one group of 5 male rats and 5 groups of 5 female rats received doses of 1000, 1500 and 2000 mg/kg bw via dermal application for 24 hours. The LD50 values of copper monochloride were 2,000 mg/kg bw or greater for male (no deaths observed) and 1,224 mg/kg bw for female. Four females died at both 1500 and 2000 mg/kg bw, and one at 1,000 mg/kg bw.</p> |
|---------------|--|

| | | | |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity | ✗ | Carcinogenicity | ✗ |
| Skin Irritation/Corrosion | ✗ | Reproductivity | ✗ |
| Serious Eye Damage/Irritation | ✗ | STOT - Single Exposure | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity | ✗ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

12.1. Toxicity

| Epiroc Chisel paste | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---------------------|---------------|--------------------|---------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| copper | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--------|----------|--------------------|-------------------------------|----------------|--------|
| | LC50 | 96 | Fish | 0.001-0.09mg/L | 2 |
| | EC50 | 48 | Crustacea | 0.001mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | 0.013335mg/L | 4 |
| | BCF | 960 | Fish | 200mg/L | 4 |
| | EC25 | 6 | Algae or other aquatic plants | 0.00150495mg/L | 4 |
| | NOEC | 96 | Crustacea | 0.0008mg/L | 4 |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites. **DO NOT discharge into sewer or waterways.**

12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------|---------------------------------------|---------------------------------------|
| | No Data available for all ingredients | No Data available for all ingredients |

12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------|---------------------------------------|
| | No Data available for all ingredients |

12.4. Mobility in soil

| Ingredient | Mobility |
|------------|---------------------------------------|
| | No Data available for all ingredients |

Epiroc Chisel paste

12.5. Results of PBT and vPvB assessment

| | P | B | T |
|-------------------------|----------------|----------------|----------------|
| Relevant available data | Not Applicable | Not Applicable | Not Applicable |
| PBT Criteria fulfilled? | Not Applicable | Not Applicable | Not Applicable |

12.6. Other adverse effects

No data available



SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|-------------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill. |
| Waste treatment options | Not Available |
| Sewage disposal options | Not Available |

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant |  |

Land transport (ADR)

| | | | | | | | | | | | | | |
|------------------------------------|--|--------------------------------|----|---------------------|----|--------------|---|--------------------|-----------------|------------------|------|-------------------------|-------|
| 14.1. UN number | 3077 | | | | | | | | | | | | |
| 14.2. UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains copper) | | | | | | | | | | | | |
| 14.3. Transport hazard class(es) | Class : 9 Subrisk : Not Applicable | | | | | | | | | | | | |
| 14.4. Packing group | III | | | | | | | | | | | | |
| 14.5. Environmental hazard | Environmentally hazardous | | | | | | | | | | | | |
| 14.6. Special precautions for user | <table border="0"> <tr> <td>Hazard identification (Kemler)</td> <td>90</td> </tr> <tr> <td>Classification code</td> <td>M7</td> </tr> <tr> <td>Hazard Label</td> <td>9</td> </tr> <tr> <td>Special provisions</td> <td>274 335 375 601</td> </tr> <tr> <td>Limited quantity</td> <td>5 kg</td> </tr> <tr> <td>Tunnel Restriction Code</td> <td>3 (-)</td> </tr> </table> | Hazard identification (Kemler) | 90 | Classification code | M7 | Hazard Label | 9 | Special provisions | 274 335 375 601 | Limited quantity | 5 kg | Tunnel Restriction Code | 3 (-) |
| Hazard identification (Kemler) | 90 | | | | | | | | | | | | |
| Classification code | M7 | | | | | | | | | | | | |
| Hazard Label | 9 | | | | | | | | | | | | |
| Special provisions | 274 335 375 601 | | | | | | | | | | | | |
| Limited quantity | 5 kg | | | | | | | | | | | | |
| Tunnel Restriction Code | 3 (-) | | | | | | | | | | | | |

Air transport (ICAO-IATA / DGR)

| | |
|----------------------------------|--|
| 14.1. UN number | 3077 |
| 14.2. UN proper shipping name | Environmentally hazardous substance, solid, n.o.s. * (contains copper) |
| 14.3. Transport hazard class(es) | ICAO/IATA Class : 9 ICAO / IATA Subrisk : Not Applicable |

| | | |
|------------------------------------|---|--------------------|
| | ERG Code | 9L |
| 14.4. Packing group | III | |
| 14.5. Environmental hazard | Environmentally hazardous | |
| 14.6. Special precautions for user | Special provisions | A97 A158 A179 A197 |
| | Cargo Only Packing Instructions | 956 |
| | Cargo Only Maximum Qty / Pack | 400 kg |
| | Passenger and Cargo Packing Instructions | 956 |
| | Passenger and Cargo Maximum Qty / Pack | 400 kg |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y956 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 30 kg G |

Sea transport (IMDG-Code / GGVSee)

| | | |
|------------------------------------|--|---------------------|
| 14.1. UN number | 3077 | |
| 14.2. UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains copper) | |
| 14.3. Transport hazard class(es) | IMDG Class | 9 |
| | IMDG Subrisk | Not Applicable |
| 14.4. Packing group | III | |
| 14.5. Environmental hazard | Marine Pollutant | |
| 14.6. Special precautions for user | EMS Number | F-A , S-F |
| | Special provisions | 274 335 966 967 969 |
| | Limited Quantities | 5 kg |

Inland waterways transport (ADN)

| | | |
|------------------------------------|--|--------------------|
| 14.1. UN number | 3077 | |
| 14.2. UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains copper) | |
| 14.3. Transport hazard class(es) | 9 | Not Applicable |
| 14.4. Packing group | III | |
| 14.5. Environmental hazard | Environmentally hazardous | |
| 14.6. Special precautions for user | Classification code | M7 |
| | Special provisions | 274; 335; 375; 601 |
| | Limited quantity | 5 kg |
| | Equipment required | PP, A*** |
| | Fire cones number | 0 |

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture****COPPER IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Europe EC Inventory

Europe European Customs Inventory of Chemical Substances

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Sweden Occupational Exposure Limit Values

Sweden Swedish Chemicals Agency (KEMI) Restricted Substances Database

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC,

Epiroc Chisel paste

- 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2015/830; Regulation (EC) No 1272/2008 as updated through ATPs.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

National Inventory Status

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (copper) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | No (copper) |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - ARIPS | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

| | |
|----------------------|------------|
| Revision Date | 03/07/2019 |
| Initial Date | 30/09/2018 |

Full text Risk and Hazard codes

| | |
|-------------|--|
| H400 | Very toxic to aquatic life. |
| H412 | Harmful to aquatic life with long lasting effects. |

SDS Version Summary

| Version | Issue Date | Sections Updated |
|---------|------------|---|
| 3.1.1.1 | 18/12/2018 | Emergency Telephone Number, Ingredients |
| 4.1.1.1 | 03/07/2019 | Appearance |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

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