SAFETY DATA SHEET

HIGH TEMPERATURE ADHESIVE FIRE CEMENT - TEMCEM BLACK

Compilation date: 19/05/2010
Revision date: 23/05/2018
Revision No: 10

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

1.1. Product identifier

Product name: HIGH TEMPERATURE ADHESIVE FIRE CEMENT - TEMCEM BLACK
CAS number: Mixture
EINECS number: Mixture

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

Use of substance / mixture: PC1: Adhesives, sealants. PROC21: Low energy manipulation of substances bound in materials and/or articles ERC5: Industrial use resulting in inclusion into or onto a matrix

1.3. Details of the supplier of the safety data sheet

Company name: Minkon Ltd
Tofts Farm Industrial Estate
Brenda Road
Hartlepool
UK
TS25 2BS
United Kingdom
Tel: +44 (0) 1429 273 252
Fax: +44 (0) 1429 232 611
Email: enquiries@minkon.co.uk

1.4. Emergency telephone number

Emergency tel: +441429273252 MTWT:08:30-17:00 F:08:30-14:00
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Eye Dam. 1: H318; Skin Irrit. 2: H315
Most important adverse effects: Causes skin irritation. Causes serious eye damage.

2.2. Label elements

Label elements:
Hazard statements: H315: Causes skin irritation.
                    H318: Causes serious eye damage.
Hazard pictograms: GHS05: Corrosion

[cont...]
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Signal words: Danger

Precautionary statements:
P102: Keep out of reach of children.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
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.
P310: Immediately call POISON CENTER/doctor.
P321: Specific treatment (see instructions on this label)

2.3. Other hazards

Other hazards: Alkaline Solution. Irritating to skin. Risk of serious damage to eyes.
PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

RAW MATERIAL - NA SILICATE SOLUTION, MR = 1.6 - 2.6 - REACH registered number(s): 01-211944872531

<table>
<thead>
<tr>
<th>215-687-4</th>
<th>1344-09-8</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irrit. 2: H315; Eye Dam. 1: H318</td>
<td>10-30%</td>
<td></td>
</tr>
</tbody>
</table>

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

Inhalation: Not applicable.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be pain and redness. The eyes may water profusely. There may be severe pain. The vision may become blurred. May cause permanent damage.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: Not applicable.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

[cont...]
Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): PC1: Adhesives, sealants.

Section 8: Exposure controls/personal protection

[cont...]
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8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

Hazardous ingredients:

RAW MATERIAL - NA SILICATE SOLUTION, MR = 1.6 - 2.6

<table>
<thead>
<tr>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL</td>
<td>Oral</td>
<td>0.80 mg/kg bw/d</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td>DNEL</td>
<td>Dermal</td>
<td>1.59 mg/kg bw/d</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td>DNEL</td>
<td>Dermal</td>
<td>0.80 mg/kg bw/d</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Fresh water</td>
<td>7.5 mg/l</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PNEC</td>
<td>Marine water</td>
<td>1 mg/l</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PNEC</td>
<td>Microorganisms in sewage treatment</td>
<td>348 mg/l</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.
Respiratory protection: Respiratory protection not required.
Hand protection: Protective gloves.
Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.
Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Paste
Colour: Brown or Black
Odour: Odourless
Evaporation rate: Slow
Oxidising: Non-oxidising (by EC criteria)
Solubility in water: Binder soluble in water/filler insoluble
Viscosity: Viscous
Relative density: 2.0 - 3.0
pH: >11.5
VOC g/l: 0

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.
10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Product is stable under normal temperature and storage conditions

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: Not applicable.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Test</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORL</td>
<td>RAT</td>
<td>LD50</td>
<td>1600-3200</td>
<td>mg/kg</td>
</tr>
</tbody>
</table>

Hazardous ingredients:

RAW MATERIAL - NA SILICATE SOLUTION, MR = 1.6 - 2.6

<table>
<thead>
<tr>
<th>DERMAL</th>
<th>RAT</th>
<th>LD50</th>
<th>&gt;5000</th>
<th>mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORAL</td>
<td>RAT</td>
<td>LD50</td>
<td>3400</td>
<td>mg/kg</td>
</tr>
</tbody>
</table>

Relevant hazards for product:

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Route</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>DRM</td>
<td>Hazardous: calculated</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>OPT</td>
<td>Hazardous: calculated</td>
</tr>
</tbody>
</table>

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be pain and redness. The eyes may water profusely. There may be severe pain. The vision may become blurred. May cause permanent damage.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: Not applicable.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.
Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

RAW MATERIAL - NA SILICATE SOLUTION, MR = 1.6 - 2.6

<table>
<thead>
<tr>
<th>Daphnia magna</th>
<th>48H EC50</th>
<th>1700 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZEBRAFISH (Brachydanio rerio)</td>
<td>96H LC50</td>
<td>1108 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Contaminated containers must be completely emptied. Dispose of as normal industrial waste.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.
Section 16: Other information

Other information:  All the alkali silicates, even those that are not classified as Dangerous Substances, are alkaline chemicals. Therefore contact with eyes, skin and clothes should be avoided and the usual procedures for handling all chemicals should be followed.
Shelf life - 12 months
This product is ROHS compliant.
This product is a water based adhesive cement - VOC Content 0 gram/litre

Phrases used in s.2 and s.3:  
H315: Causes skin irritation.
H318: Causes serious eye damage.

Legal disclaimer:  The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.