

## FLASHCRETE & FLASHCRETE PLUS +

Applications and benefits for using Flashcrete rapid mortar and concrete

1

### Applications

- General purpose high performance rapid mortar or concrete
- Heat resistant concrete repairs
- Anchorage for bolts
- Placement of bathroom fittings such as toilet bowls and pipe fittings
- General rapid repair where a fast completion of the work is required
- Flashcrete is a coarse mortar whilst Flashcrete + is a 6mm or less concrete, both are intended for small repair jobs or preparation work

2

### Benefits

- Resistant to H<sub>2</sub>S corrosion in sewers
- Heat resistant up to 500° C
- Rapid hardening with high early and ultimate strengths
- Resistant to dilute acids oils vegetable juices etc

Product		Flashcrete	Flashcrete +
Initial set (min)		5 - 10	30 – 45
Compressive Strength (Mpa)	1h	5	-
	6h	>	>20
	24h	>20	>40

Instructions for use:

Packaging: 5 kg or 10 kg buckets

3

### Mixing

Add 0.5 Litre of water to a 5 kg bucket of Flashcrete or 1Litre of water to a 10 kg bucket of Flashcrete plus.

To mix the product, roll the bucket on the ground with occasional shaking for 1 minute.

Use within 5 minutes of preparation for Flashcrete and 45 minutes for Flashcrete +.

Do not mix with ordinary portland cement as immediate setting may occur.

4

### Site Preparation

Make sure the existing surface is clean roughened and free from any loose material or dust.

All tools must be thoroughly cleaned before using Flashcrete.

Thoroughly dampen the existing concrete before placing Flashcrete.

5

### Curing

Flashcrete will develop its highest strength when cured for a minimum of 24 hours after placing with one of the following methods:

- Polythene sheeting
  - Water curing ie. mist spraying
  - Wax or resin based compound
- TECHNICAL RECOMMENDATIONS FOR MIXING, PLACING AND CURING CAN BE OBTAINED ON REQUEST

## PRODUCT HEALTH AND SAFETY DATA SHEET

### FLASHCRETE & FLASHCRETE PLUS+

<p><b>1. IDENTIFICATION OF SUBSTANCES</b></p> <p><b>Name:</b> Flashcrete and Flashcrete+</p> <p>Premixed Calcium Aluminate Cement and Natural aggregates An odourless grey to black particles, insoluble in water Packaging – 5 and 10 kg buckets</p> <p><b>2. COMPOSITION</b></p> <p>The principle constituents are :-</p> <p><b>Chemistry – cementitious component</b></p> <table> <tr> <td>Al<sub>2</sub>O<sub>3</sub></td> <td>38.0 – 40.0 %</td> </tr> <tr> <td>CaO</td> <td>37.0 – 39.0 %</td> </tr> <tr> <td>SiO<sub>2</sub></td> <td>3.0 – 5.0 %</td> </tr> <tr> <td>Fe<sub>2</sub>O<sub>3</sub>/FeO</td> <td>15.0 – 18.0 %</td> </tr> </table> <p><b>3. PHYSICAL AND CHEMICAL PROPERTIES</b></p> <table> <tr> <td><b>Physical state</b></td> <td>particular</td> </tr> <tr> <td><b>Particle Size Distr.</b></td> <td>1 microns to 6.7 mm</td> </tr> <tr> <td><b>pH Water Solution</b></td> <td>11.0 – 11.5</td> </tr> <tr> <td><b>Relative Density</b></td> <td>2.858</td> </tr> <tr> <td><b>Bulk Density</b></td> <td>1263 kg/m<sup>3</sup></td> </tr> <tr> <td><b>Max. Service Temp.</b></td> <td>500 °C</td> </tr> <tr> <td><b>Flammability</b></td> <td>N/A (non flammable)</td> </tr> <tr> <td><b>Explosive Properties</b></td> <td>N/A (non explosive)</td> </tr> </table> <p><b>4. PHYSICAL AND CHEMICAL PROPERTIES</b></p> <p>Conditions contributing to :-</p> <table> <tr> <td><b>Chemical Instability</b></td> <td>None</td> </tr> <tr> <td><b>Hazardous Decomposition Products</b></td> <td>None</td> </tr> <tr> <td><b>Special Precautions</b></td> <td>None</td> </tr> </table> <p><b>5. TOXICOLOGICAL INFORMATION</b></p> <p>This material has no known toxic or carcinogenic effects.</p>	Al <sub>2</sub> O <sub>3</sub>	38.0 – 40.0 %	CaO	37.0 – 39.0 %	SiO <sub>2</sub>	3.0 – 5.0 %	Fe <sub>2</sub> O <sub>3</sub> /FeO	15.0 – 18.0 %	<b>Physical state</b>	particular	<b>Particle Size Distr.</b>	1 microns to 6.7 mm	<b>pH Water Solution</b>	11.0 – 11.5	<b>Relative Density</b>	2.858	<b>Bulk Density</b>	1263 kg/m <sup>3</sup>	<b>Max. Service Temp.</b>	500 °C	<b>Flammability</b>	N/A (non flammable)	<b>Explosive Properties</b>	N/A (non explosive)	<b>Chemical Instability</b>	None	<b>Hazardous Decomposition Products</b>	None	<b>Special Precautions</b>	None	<p><b>6. HAZARD IDENTIFICATION</b></p> <p><b>Classification :</b> Finer fraction - Irritant</p> <p><b>Human Effects :</b> In contact with water, an alkaline solution occurs (pH 11-11.5). In spite of the pH level, the alkaline reserve is limited, and the product has not been classified as <i>irritant</i> according to criteria defined in the EEC directives (93/21/EEC).</p> <p>A dust problem may occur in confined areas. It is regarded as nuisance dust without any known specific effects to health.</p> <p><b>Environmental Effects :</b> No effects, calcium aluminates are insoluble in water</p> <p><b>Specific hazards</b></p> <p>Calcium aluminates react chemically and harden when mixed with water. The reaction is exothermic resulting in a temperature rise. In large quantities the temperature may increase enough to cause a risk of burns.</p> <p><b>7. EXPOSURE CONTROLS / PERSONAL PROTECTION</b></p> <p>Occupational Exposure Standard (OES), 8 hrs Time Weighted Average (TWA)</p> <p><b>Total Inhalable Dust :</b> 10 mg/m<sup>3</sup> <b>Total Respirable Dust :</b> 5 mg/m<sup>3</sup></p> <p><u>Personal Protection</u></p> <p><b>Eyes :</b> Dust proof goggles should be worn whenever there is a risk of powder or wet mixture entering the eyes</p> <p><b>Skin :</b> Protective clothing should be worn, including waterproof gloves, trousers and Wellington boots</p> <p><b>Respiratory Protection :</b> Suitable respiratory protection should be worn, to ensure that personal exposure is less than the OES, i.e. dust mask</p>
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<p><b>8. <u>FIRST AID MEASURES</u></b></p> <p><b>Skin Contact :</b> Wash affected areas with plenty of clean water.</p> <p><b>Eye Contact :</b> Wash eye immediately with plenty of clean water and if necessary seek medical advice</p> <p><b>Inhalation :</b> If irritation occurs, move to fresh air. If nose or airways become inflamed, seek medical advice.</p> <p><b>Ingestion :</b> Do not induce vomiting. Wash out mouth with water and give patient plenty of water to drink.</p> <p><b>9. <u>FIRE FIGHTING MEASURES</u></b></p> <p>The substance is not flammable and does not support burning or dangerous synergistic reactions with other materials, provided that these substances themselves are stable</p> <p><b>10. <u>ACCIDENTAL RELEASE MEASURES</u></b></p> <p><b>On spillage :</b> Spilt material may be collected for re-use, provided that no contamination has occurred.</p> <p><b>Personal Protection :</b> See Item 7.</p> <p><b>Environmental Precautions :</b> Do not empty materials into drains, sewers / water courses as substances hardens when in contact with water.</p> <p><b>11. <u>HANDLING AND STORAGE</u></b></p> <p><b>Storage :</b> Store in dry conditions, preferably above ground on pallets protect by shrinkwrapping. This will prevent moisture ingress and prolong shelf life.</p> <p><b>Handling :</b> Wear personal protective equipment and clothing to avoid contact with the skin and eyes.</p>	<p><b>12. <u>DISPOSAL</u></b></p> <p>Dispose of empty bags and material at an authorized disposal site.</p> <p><b>13. <u>ECOLOGICAL INFORMATION</u></b></p> <p>Stable In soil. No photo degradation with sunlight. When mixed with water, the increase in pH may in some cases be toxic to aquatic life</p> <p><b>14. <u>TRANSPORTATION INFORMATION</u></b></p> <p>Not classified as hazardous for transport purposes</p> <p><b>15. <u>REGULATORY INFORMATION</u></b></p> <p><b>Chemical</b></p> <p><b>Classification –</b> Irritant</p> <p><b>Risk Phases –</b> None</p> <p><b>Safety Phases –</b> wear protective clothing, gloves and eye/face protection</p> <ul style="list-style-type: none"> <li>- in case of contact with eyes, rinse immediately with plenty of clean water. If necessary seek medical advice</li> <li>- after contact with skin, wash immediately with plenty of clean water</li> <li>- keep out of reach of children</li> </ul> <p><b>16. <u>RELEVANT REGULATIONS AND REFERENCES</u></b></p> <p>HSE Occupational Exposure Criteria Documents Summaries 1993 Edition (ISBN 0118821202)</p> <p>HSE Guidance Note EH26 (Occupational Skin Diseases Health and Safety Precautions – HMSO 1981)</p> <p>HSE Guidance Note EH40 (Occupational Exposure Limits)</p>
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