

Sikagard®-720 EpoCem®

Superfine epoxy cement sealing mortar and temporary moisture barrier

Construction

Description

Sikagard-720 EpoCem is a 3-component epoxy-modified cementitious sealing and levelling mortar, suitable for application to most mineral based substrates. It's specific balanced formulation ensures that the properties of the hydrated cement are both complemented and enhanced by the integral epoxy mortar.

Uses

Used on both vertical and horizontal surfaces of concrete, mortar or stone, the thixotropic mortar can be applied as a thin layer coating, 0.5 – 2 mm thick or as a scraping/levelling mortar to fill in blow holes, shallow honeycombing and other surface irregularities. It's ability to provide a temporary moisture barrier provides an ideal substrate for subsequent epoxy coatings.

Advantages

- Waterproof yet permeable to water vapour, allows the substrate to "breathe".
- Excellent bond to green or hardened concrete whether damp or dry
- Fast and easy to apply to sound prepared substrates.
- Solvent free and virtually odourless.
- Ideal surface preparation with the minimum of delay for the subsequent application of other appropriate Sika epoxy products.
- High abrasion resistance.
- Free of chloride.
- Similar thermal and elastic properties to concrete.
- Good adhesion after long-term water immersion.
- Suitable for interior or exterior use.

Storage and Shelf Life

Stored in the original sealed containers within the temperature range of +5°C to +35°C, this product will keep for a minimum of 12 months.

Instructions for Use

Substrate Quality

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².

The substrate must be damp but free of standing water and free of all contaminants such as oil, grease, coatings and surface treatments etc.

Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning or high pressure water jetting equipment to remove cement laitance, especially oil or wax containing layers and achieve an open textured surface.

Substrates heavily impregnated with oil must be cleaned by torching or other methods. To check that all traces of oil have been completely removed, sprinkle a few drops of water over the surface. If all the water is quickly absorbed, the surface is sufficiently oil and grease free. If water forms into globules that remain on the surface, further thorough treatment of the substrate is necessary.

Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.

Repairs to the substrate, filling of blow holes/voids and surface levelling must be carried out using appropriate products for Sikafloor®, Sikadur® and Sikagard® range of materials.

High spots can be removed by grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.



Mixing	Shake Component A (white liquid) briefly and pour into Component B (plastic container) and shake vigorously for 30 seconds. Pour the mixture (A + B) into a 25-30 litre pail and add Component C. Mix thoroughly for at least 3 minutes using a low speed electrically driven paddle/stirrer until a smooth homogenous consistency is achieved.																								
Mixing Tools	Mix using a slow speed electric mixer (300 - 400 rpm) with helical paddle or other suitable equipment. Also suitable are single or counter rotating double mortar (basket type) and forced action (pan type) mixers. Free fall mixers must not be used.																								
Application	Sikagard-720 EpoCem can be applied by steel trowel, spatula etc., to the prepared dry or damp substrate. Work the material well into the substrate to ensure complete filling of voids etc., and intimate surface contact. Following initial set a fine surface finish can be achieved by finishing with a damp sponge or suitable brush. A fine gripping surface finish is recommended for subsequent epoxy coatings.																								
Cleaning	Clean all tools with water immediately after use. Once cured, Sikagard-720 EpoCem can only be removed mechanically.																								
Technical Data (Typical)																									
Form	Part A: White liquid Part B: Dark grey liquid Part C: Grey powder Mixed: Thixotropic flowable mortar																								
Density	2.0 kg/litre approx. (mixed)																								
Mix ratio (by mass)	Component A : 1 Component B : 2.75 Component C : 15 – 17.7 (depending on required consistency)																								
Rate of reaction (@ 75% relative humidity)	<table border="1"> <thead> <tr> <th></th> <th>10°C</th> <th>20°C</th> <th>30°C</th> </tr> </thead> <tbody> <tr> <td>Potlife (approx. for 23 kg mix)</td> <td>45 mins</td> <td>35 mins</td> <td>25 mins</td> </tr> <tr> <td>Curing times</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ready for overcoating:</td> <td>1 day</td> <td>18 hours</td> <td>12 hours</td> </tr> <tr> <td>Light loading permitted:</td> <td>3 days</td> <td>2 days</td> <td>1 day</td> </tr> <tr> <td>Fully cured:</td> <td>14 days</td> <td>7 days</td> <td>5 days</td> </tr> </tbody> </table>		10°C	20°C	30°C	Potlife (approx. for 23 kg mix)	45 mins	35 mins	25 mins	Curing times				Ready for overcoating:	1 day	18 hours	12 hours	Light loading permitted:	3 days	2 days	1 day	Fully cured:	14 days	7 days	5 days
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System structure	<p>The system configuration as described must be fully complied with and may not be changed.</p> <p>Primer indicated below is suitable for each of these substrates: Green concrete (as soon as mechanical preparation is possible) Damp concrete (> 14 days old) Damp aged concrete (rising moisture)</p> <p>Vertical or horizontal pore filling, repair and levelling: Layer thickness: 0.5 - 3 mm Primer: EpoCem Module Part A and B Topping: Sikagard-720 EpoCem</p>																								
Consumption	Approx. 2.5 to 3.5 kg/m ² for thickness of 1.0 to 1.5 mm.																								
Bond strength	Greater than 1.5 MPa on prepared concrete substrate.																								

Limitations on application	Maximum coating thickness:	2 mm
	Minimum substrate temperature:	+8°C
	Maximum substrate temperature:	+30°C
Packaging	Part A:	1.07 kg plastic bottle
	Part B:	2.93 kg plastic bottle
	Part C:	19 kg paper bag

- Important Notes**
- ON NO ACCOUNT SHOULD WATER BE ADDED TO THE MIX.
 - Curing: Sikagard-720 EpoCem is insensitive to wind during curing, but substrates should be primed with EpoCem Module (Part A + B) before application if very absorbent or if exposure to intense sunlight is probable.
 - Sikagard-720 EpoCem should not be used to bridge “live” cracks, joints etc.
 - Sikagard-720 EpoCem is overpaintable with solvent free and low solvent containing products after the curing times given. A more extended curing period is necessary with high solvent products. Consult our Technical Department for further information.
 - Always ensure good ventilation when using Sikagard-720 EpoCem in a confined space, to remove excess moisture.
 - Freshly applied Sikagard-720 EpoCem must be protected from damp, condensation and water for at least 24 hours.
 - For external applications, apply primer and Sikagard-720 EpoCem on a falling temperature. If applied during rising temperatures “pin holing” can occur.
 - The incorrect assessment and treatment of cracks can lead to reduced service life and reflective cracking.
 - Colour variations can occur on unsealed Sikagard-720 EpoCem through exposure to direct sunlight. This however, will not influence the mechanical properties.
 - When overlaying with PMMA screeds, the surface of Sikagard-720 EpoCem must be fully broadcast with Sikadur-501.
 - The T.M.B. effect in EpoCem is limited in time, without additional preparation. Always verify the surface moisture content if more than 5 - 7 days have passed since application.

Handling Precautions Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period by washing with soap and warm water. A full material safety data sheet is available from Sika on request.

Notes The information, and, in particular, the recommendations relating to the application and end-use of Sika’s products, are given in good faith based on Sika’s current knowledge and experience of the products when properly stored, handled and applied under normal conditions. . In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER

