

PRODUCT DATA SHEET

Sikagard[®]-720 EpoCem HC

SUPERFINE EPOXY-CEMENT SEALING MORTAR

DESCRIPTION

Sikagard[®]-720 EpoCem HC is a three part, epoxy modified cementitious, thixotropic, fine textured mortar for levelling and finishing of concrete or mortar surfaces.

USES

- As sealing mortar (0.5 – 2.0 mm) on concrete and mortar.
- For repairs to fair faced concrete in chemically aggressive environment.
- As pore sealer on horizontal and vertical surfaces.
- As temporary moisture barrier.

CHARACTERISTICS / ADVANTAGES

- An ideal surface preparation for the subsequent application of Sika epoxy products.
- Ideal preparation for smooth surface finishes
- Minimum delays to follow-up applications of Sika epoxy products.
- Fast and easy to apply.
- Impervious to liquids but permeable to water vapour (allows substrate to “breathe”).
- Excellent adhesion to dry or damp concrete
- Suitable for interior and exterior use.
- Solvent-free.

PRODUCT INFORMATION

Chemical Base	Epoxy modified cementitious mortar	
Packaging	Pre-dosed 21 kg sets.	
	Part A	1.14 kg plastic container
	Part B	2.86 kg plastic container
	Part C	17 kg ready to mix units
Appearance / Colour	Part A - resin	White liquid
	Part B - hardener	Transparent yellow liquid
	Part C - filler	Aggregate powder
	Finish Colour	Grey
Shelf Life	Part A & part B	12 months
	Part C	9 months
	From date of production if stored in original, unopened and undamaged sealed packaging.	
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C. Part A & part B: Protect from frost Part C: Protect from humidity	
Density	2.0 kg/L (at +20° C)	

TECHNICAL INFORMATION

Compressive Strength	~40 N/mm ²	
Tensile Strength in Flexure	~5 N/mm ²	
Tensile Adhesion Strength	~1.5 N/mm ² (concrete failure)	
Coefficient of Thermal Expansion	~13.0 x 10 ⁻⁶ 1/K	
Water Absorption	~0.03 kg/m ² x h ^{0.5} (Coefficient A)	
Diffusion resistance to carbon dioxide	μ _{CO2} ~5400	(EN 1062-6)

SYSTEM INFORMATION

System Structure	The system configuration as described must be fully complied with and may not be changed. Vertical or horizontal pore filling, repair and levelling:	
	Layer thickness	0.5 – 2 mm
	Primer	SikaRepair EpoCem Module HC
	Render	Sikagard®-720 EpoCem HC
	Top coating	Suitable product from the Sikafloor® and Sikagard® range can be used as soon as the surface humidity of Sikagard®-720 EpoCem HC has reached 4%

APPLICATION INFORMATION

Mixing Ratio	Part A : part B : part C - packaging size: 1.14 : 2.86 : 17 kg Mixing ratio: 1 : 2.5 : 14 - 15 (by weight)
Consumption	~2.0 kg/m ² for 1 mm layer thickness. This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level or wastage, etc.
Layer Thickness	min. 0.5 mm, max. 3 mm
Ambient Air Temperature	+10 °C min. / +35 °C max.
Substrate Temperature	+10 °C min. / +35 °C max.
Pot Life	~30 min (+30 °C)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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

If in doubt, apply a test area first.

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

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

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

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

MIXING

Prior to mixing, shake part A (white liquid) briefly until homogenous, then pour into the container of part B and mix well for at least 30 seconds.

Pour the mixed binder (A+B) into a suitable mixing container (capacity of about 30 liters) and gradually add part C while stirring with a power mixer. Mix thoroughly for 3 minutes until a uniform mix has been achieved, with no lumps.

Mixing Tools

Mix using a slow speed electric mixer (300 - 400 rpm) with helical paddle or other suitable equipment. For mixing 2–3 bags at once, single or counter rotating double mortar (basket type) and forced action (pan type) mixers are also suitable. Free fall mixers must not be used.

APPLICATION

Place mixed Sikagard®-720 EpoCem HC onto the matt damp substrate and spread evenly to the required thickness with a trowel or spatula. If necessary, it may be finished with a moist neoprene sponge or brush. It is not permitted to use additional water, which would disturb the surface finish and cause discoloration.

CLEANING OF TOOLS

Mixing and application tools must be cleaned with water. Hardened material can only be mechanically removed.

LIMITATIONS

- Always ensure good ventilation when using Sikagard®-720 EpoCem HC in a confined space, to remove excess moisture.
- Freshly applied Sikagard®-720 EpoCem HC must be protected from damp, condensation and water for at least 24 hours.
- For external applications, apply primer and Sikagard®-720 EpoCem HC on a falling temperature. If applied during rising temperatures “pin holing” can occur.
- Non moving construction joints require pre-treatment with a stripe coat of primer and Sikagard®-720 EpoCem HC. Treat as follows:

Static cracks	Prefill and level with Sikadur® or Sikafloor® epoxy resin.
Dynamic cracks (> 0.4mm)	To be assessed on site and if necessary apply a stripe coat of elastomeric material or design as a movement joint.

- The incorrect assessment and treatment of cracks can lead to a reduced service life and reflective cracking.
- Colour variations can occur on unsealed Sikagard®-720 EpoCem HC through exposure to direct sun light. This however, will not influence the mechanical properties.
- When overlaying with PMMA screeds, the surface of Sikagard®-720 EpoCem HC must be fully broadcast with sand 0.4–0.7 mm.
- The TMB 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.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

ECOLOGY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika 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 accordance with Sika's recommendations. 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 user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

Sika Taiwan Ltd.

No. 1380, Sec. 3, Fu-Kwo Rd., Luchu Dist.
33849 Taoyuan City, Taiwan, R.O.C.
TEL: 03 352 8622 . FAX: 03 352 0470
sika@tw.sika.com . tw.sika.com

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