

PRODUCT DATA SHEET

Sikafloor®-542 EpoCem®

(formerly MTop 542ECC)

Water based, self smoothing epoxy-cementitious under layer floor screed

DESCRIPTION

Sikafloor®-542 EpoCem® is a three-component self-smoothing floor topping based on epoxy-cementitious system, which on mixing yields a breathable, high performance floor topping. The finished topping exhibits temporary moisture barrier.

USES

Sikafloor®-542 EpoCem® is formulated for underlay application as temporary moisture barrier for resin based floor finishes.

Application areas include:

- Hospitals, laboratories and medical clinics
- Clean rooms and aseptic areas
- Packing and storage areas
- Automotive assembly areas & showrooms
- Aircraft hangars & auxiliary areas
- Refurbishing granolithic floor toppings

CHARACTERISTICS / ADVANTAGES

- Water based - no fire hazard nor toxic fumes.
- Self smoothing - easy to spread and finish.
- Excellent mechanical strengths.
- Seamless - can easily maintain hygienic condition.
- Breathable – excellent adhesion and finish.

PRODUCT INFORMATION

Packaging	Pre-batched 21 kg units.	
	Part A	1 kg container
	Part B	3 kg container
	Part C	17 kg bag
Shelf Life	12 months from date of production	
Storage Conditions	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.	
Density	Mixed ~2.10 kg/l	

TECHNICAL INFORMATION

Shore D Hardness	> 80	(ASTM D 2240)
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Abrasion Resistance	< 70 mg,1000 cycles, CS17 wheel	(ASTM D4060)
Compressive Strength	45 Mpa	(ASTM C579)
Tensile Strength in Flexure	10 Mpa	(BS 6319 Part 3)
Tensile Adhesion Strength	1.5 MPa (concrete failure)	(ASTM D4541)

SYSTEM INFORMATION

Systems	Application	Product
	Self-smoothing Screed	Sikafloor®-542 EpoCem®
Dry film thickness	2 - 4 mm	

APPLICATION INFORMATION

Mixing Ratio	Resin : Hardener : Filler = 1 : 3 : 17
Consumption	4.75 m ² /21.0 kg pack at 2mm
Ambient Air Temperature	+10 °C min. / +30 °C max.
Relative Air Humidity	80 % max.
Substrate Temperature	+10 °C min. / +30 °C max.
Pot Life	20 Minutes at 25°C
Waiting Time / Overcoating	24 to 72 Hours at 25°C
Drying Time	24 Hours at 25°C

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.

FURTHER DOCUMENTS

LIMITATIONS

- The incorrect assessment and treatment of cracks in the floor substrate can lead to a reduced service life and reflective cracking.
- Pre-treat cracks as follows before application of Sikafloor®-542 EpoCem®: Static Cracks: Prefill and level with Sikadur® or Sikafloor® epoxy resin. Dynamic Cracks (> 0.4 mm): To be assessed on site and if necessary apply a stripe coat of elastomeric material or design as a movement joint.
- Do not use any water in the mix or for finishing as this will affect the performance, surface finish and cause discolouration.
- If Sikafloor®-542 EpoCem® is used as TMB (Temporary Moisture Barrier), a 2 mm minimum thickness must be applied. (~4.5 kg/m²)
- Always ensure good ventilation when using product in a confined space to remove excess moisture.
- After application, product must be protected from damp, condensation and direct water contact for at least 24 hours
- Prevent premature drying by protecting from strong winds and do not expose to direct sun light while in

an unhardened condition.

- Apply primer and Sikafloor®-542 EpoCem® on a falling temperature. If applied during rising temperatures “pin holing” can occur.
- Curing is not required, however applications under extreme conditions (high temperature and low humidity) which can cause fast drying of the product must be avoided.
- Do not add water to the mix. When product is exposed to direct sunlight, there may be some discolouration and colour variation, this has no influence on the function and performance of the floor finish.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment required for the project:

Substrate preparation

- Abrasive blasting cleaning equipment
- Planing machine
- Scarifying machine
- Shot blasting machine

- Dismond grinding
- For other types of preparation equipment, contact Sika Technical Services

Mixing

- Electric double paddle mixer (300–400 rpm) with helix paddle
- Forced action / rotating pan / double paddle or trough type mixer (300–400 rpm).
- Scraper
- Clean mixing containers
- For other types of mixing equipment, contact Sika Technical Services

Application: Self-levelling screed

- Mixed material carrier
- Pin rack leveller
- Trowels
- Spiked roller
- Squeegee

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.
- Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.
- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface gripping surface profile suitable for the product thickness.
- High spots can be removed by grinding. 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 extraction equipment.

MIXING

Prior to mixing, shake Part A (white liquid) briefly until uniformly mixed. Then pour into Part B container and shake vigorously for at least 30 seconds. When dosing out of drums, uniformly mix Parts A and B separately before mixing together. Pour the mixed binder mixture (Parts A+B) into a suitable mixing container (capacity ~30 litres). Using an electric single or double paddle mixer or other similar equipment, gradually add Part C. Mix for a further 3.0 minutes until a uniform lump free mix has been achieved. To ensure thorough mixing, pour materials into another container and mix again for 30 second to achieve a smooth consistent mix. Mix full units only. Do not add water.

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APPLICATION

Pour mixed Sikafloor®-542 EpoCem® onto the prepared primed substrate and spread evenly using a suitable trowel or pin leveller to the required thickness. Spike roller immediately in two directions at right angles to each other to remove trowel marks, aid air release, ensure an even thickness and obtain the required surface finish. A seamless finish can be achieved if a 'wet' edge is maintained during application.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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