

SYSTEM DATA SHEET

Sikafloor® EpoCem® ES-14 AP

Epoxy-cement hybrid self-smoothing floor screed and smooth finish flooring system

DESCRIPTION

Sikafloor® EpoCem® ES-14 AP is an epoxy-cement hybrid, fine textured screed followed by epoxy scratch coat for a smooth finish industrial flooring system. It provides a hard wearing, seamless, low maintenance smooth wearing layer. Thickness 2.0–3.0 mm. Internal use.

USES

Sikafloor® EpoCem® ES-14 AP may only be used by experienced professionals.

As a Temporary Moisture Barrier (TMB) (min. 2 mm thick) under epoxy, polyurethane and PMMA resin floors, over high moisture content substrates, even green concrete.

As a self-smoothing screed for:

- Levelling or patching horizontal concrete surfaces, in new work or repairs, particularly in aggressive chemical environments
- Floor topping on non-ventilated damp substrates without particular aesthetic requirements
- Levelling layer under epoxy, polyurethane and PMMA floor coatings / screeds, tiles, sheet floors, carpets or wooden floors
- Repair and maintenance of monolithic and vacuum concrete floors

As a patching and repair mortar, when extended with quartz sand:

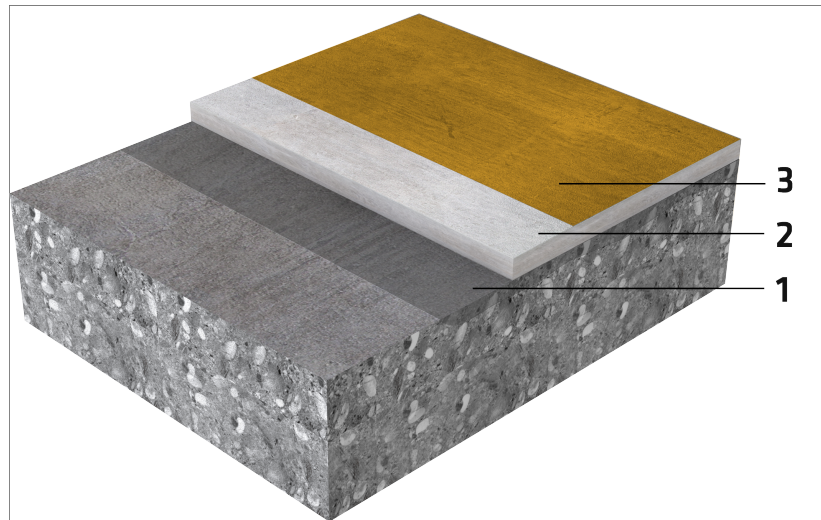
- Under epoxy, polyurethane and PMMA floor coatings / screeds for multi-storey and underground car parks, maintenance hangars and for wet process areas, e.g., beverage and food industry for areas where slip resistance and easy cleanability is required

CHARACTERISTICS / ADVANTAGES

- Can be top coated with resin based floors after 24 hours (at +20 °C / 75 % r.h.)
- Impervious to liquids but permeable to water vapour
- Prevents osmotic blistering of resin based coatings over damp substrates
- Economical and fast, easy application
- Water-based, solvent-free and odourless
- Good levelling properties
- Frost and de-icing salt resistant
- Good chemical resistance
- Thermal expansion properties similar to concrete
- Excellent bond to green or hardened concrete whether damp or dry
- Excellent early and final mechanical strengths
- Excellent resistance to water and oils
- Ideal preparation for smooth surface finishes
- For internal use
- Does not corrode reinforcement steel
- Class R4 of EN 1504-3

SYSTEM INFORMATION

System structure



Layer	Product
1. Primer	Sikafloor®-80 EpoCem® Primer
2. Moisture barrier underlayer	Sikafloor®-81 EpoCem®
3. Scratch primer coat	Sikafloor®-161 HC/-264 HC N + 1.5–2 % Sika® Extender T

Composition	Under layer	Epoxy-cement hybrid
	Top layer	Epoxy
Appearance	Textured scratch coat finish	
Colour	Under layer	Grey
	Top layer	Available in many colours
Nominal thickness	2–3 mm	
Minimum thickness	2 mm	

TECHNICAL INFORMATION

Resistance to impact	20.01 Joules	(IS 101, Part 5 Sec 3)
Chemical resistance	Please refer to the chemical resistance chart	

APPLICATION INFORMATION

Consumption	Layer	Product	Consumption
	1. Primer	1–2 × Sikafloor®-80 EpoCem® Primer	~0.2–0.3 kg/m ² /coat
	2. Levelling screed	Sikafloor®-81 EpoCem®	~2.25 kg/m ² /mm
	3. Scratch coat	1–2 × Sikafloor®-161 HC/-264 HC N + 1.5–2 % Sika® Extender T	~0.08–0.1 kg/m ² /coat
Ambient air temperature	+10 °C min. / +35 °C max.		
Relative air humidity	80 % max.		

Dew point

Beware of condensation.

The substrate and uncured applied floor material must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Be aware that the substrate temperature may be lower than the ambient temperature.

Substrate temperature

+10 °C min. / +35 °C max.

Substrate moisture content

Can be installed on substrates with a moisture content of ≤ 6 % (measured by Sika®-Tramex meter). The substrate must be visibly dry with no standing water and have a tensile strength of ≥ 1.5 N/mm².

Can also be applied on green or damp concrete with no standing water. Although the system can be applied onto green concrete surfaces (> 7 days), it is advised to allow at least 3 days for early concrete shrinkage to occur in order to prevent shrinkage cracks from appearing on the wearing surface.

Waiting time / Overcoating

Before applying Sikafloor®-81 EpoCem® on Sikafloor®-80 EpoCem® Primer allow:

Substrate temperature	Minimum	Maximum
+10 °C	12 hours	3 days
+20 °C	06 hours	2 days
+30 °C	04 hours	1 day

Sikafloor®-81 EpoCem® can be overcoated with vapour tight scratch coat when the surface moisture falls below 4 %. Before applying Sikafloor®-161 HC/-264 HC N on Sikafloor®-81 EpoCem® allow:

Substrate temperature	Minimum
+10 °C	2 days
+20 °C	1 day
+30 °C	1 day

Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

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

- Sika Method Statement: Sikafloor® EpoCem®
- Sika Method Statement: Sikafloor® MultiDur®
- Sika Method Statement: Sikafloor®-Cleaning Regime
- Sika Method Statement: Evaluation and Preparation of Surfaces for Flooring Systems
- Individual Product Data Sheets within the flooring system

IMPORTANT CONSIDERATIONS

- If Sikafloor®-81 EpoCem® is used as TMB (Temporary Moisture Barrier), a layer of a minimum 2 mm thick (~ 4.5 kg/m²) must be applied.
- Always ensure good ventilation when using Sikafloor®-81 EpoCem® in a confined space to prevent excessive ambient humidity.
- After application, the products must be protected from damp, condensation and water for at least 24 hours.
- Prevent premature drying by protecting from strong

wind and do not expose to direct sun light while fresh.

- Apply primer and Sikafloor®-81 EpoCem® on a falling temperature. If applied during rising temperatures "pin holing" can occur.
- Applications under extreme conditions (high temperature and low humidity) which can cause fast drying of the product must be avoided as the product does not allow the use of curing compounds.
- Under no circumstances add water to the mix.
- Colour variations can occur on unsealed Sikafloor®-81 EpoCem® through exposure to direct sun light. This will not adversely influence the mechanical properties.
- Always verify the surface moisture content if more than 5–7 days have passed since application.
- Non-moving construction joints require pre-treatment with a stripe of primer and Sikafloor®-81 EpoCem®.
- Do not apply on cracked or unsound substrates.
- First treat cracks as follows: For static cracks, prefill and level with Sikadur® or Sikafloor® epoxy resin. For 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.
- The incorrect assessment and treatment of cracks can lead to a reduced service life and reflective cracking.
- When applying scratch coat, the surface of Sika-

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floor®-81 EpoCem® must be cleaned by industrial vacuum cleaner.

- Second scratch coat is recommended in case pin hole/ surface defect persists before application of epoxy/polyurethane/PMMA topping.
- Protect the substrate and Sikafloor® EpoCem® ES-14 AP during application from pipe condensation or any overhead leaks.
- Always allow a minimum of 48 hours after product application prior to placing foodstuff in the same area.

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.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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.

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