



# Sikafloor® 81 EpoCem®

## Epoxy Cement Self Smoothing Screed (1.5 - 3.0 mm)

### Technical Data Sheet

#### DESCRIPTION

**Sikafloor 81 EpoCem** is a three component epoxy modified cementitious self smoothing screed. Particularly used as a base layer beneath **Sikafloor** coatings, mortars, screed, timber flooring, carpets, tiles etc. When used in conjunction with an impervious top coat it provides a surface mounted damp proof membrane system which can be applied to green and damp substrates.

#### USES

- \* Laboratories
- \* Dairies.
- \* Food processing/manufacturing areas.
- \* Pharmaceutical plants.
- \* Containment areas.
- \* Workshops.
- \* Car park decks.
- \* Bridge deck reprofiling.
- \* Offices.

#### ADVANTAGES

- \* Solvent free.
- \* Excellent adhesion even on damp/green concrete.
- \* Does not require curing.
- \* Allows fast track construction.
- \* Self smoothing.
- \* Properties similar to concrete.
- \* Excellent mechanical strengths.
- \* Waterproof.
- \* Vapour check layer (2 mm + thickness)
- \* Overcomes 'osmotic' problems.
- \* Can be overcoated with floor finish within 24 hours.

#### Technical Data (typical)

**Colour:** Grey (red/yellow with pigment)

**Density (SG):** Approx 2.1 kg/litre

**Volume solids:** Approx 100%

**Application temperatures & humidity conditions:** +10°C min\*, +30°C max (Substrate and ambient)  
RH 85% max

**Substrate M.C. & RH:** ≤12% by Wt or ≤95% RH

**Application thickness:** 1.5 mm minimum  
3.0 mm maximum

#### MECHANICAL PROPERTIES:

**Compressive strength:**  
**28 days @ 23°C** >60 N/mm<sup>2</sup>  
**50% RH:**

**CHEMICAL RESISTANCE:** Refer to chart  
(Consult Sika Ltd for additional information)

**Ultimate compressive strength:** 60 N/mm<sup>2</sup>

**Additional application information:**

	+10°C	+20°C	+30°C
<b>Pot life:</b>	30 mins	20 mins	10 mins

**Overcoating times:**

	+10°C	+20°C	+30°C
<b>Sikafloor 155W</b>	-	12hours	-
<b>EpoCem Module</b>	-	1 hour	-
<b>Sikafloor coating</b>	2 days	1 day	1 day

#### Final drying times:

	+10°C	+20°C	+30°C
Foot traffic:	24 hours	15 hours	12 hours
Lightly serviceable:	3 days	2 days	1 day
Fully serviceable:	14 days	7 days	5 days

All above values are approximate.

#### FLOOR COATING SYSTEM:

##### Self smoothing screed:

##### Primer:

Porous substrate: 1 x **Sikafloor 155W**.

Normal substrate: 1 - 2 x **Sikafloor EpoCem module**.

**Screed:** 1 x **Sikafloor 81 EpoCem**

**Seal coat:** **Sikafloor** coating to suit.

**Material consumption:** Approx 2.1 kg/m<sup>2</sup> per mm

##### Broadcast system:

**Primer:** 1 x **Sikafloor EpoCem Module**.

**Screed:** 1 x **Sikafloor 81 EpoCem**  
(2.0 - 3.0 mm)

**Broadcast:** Quartz sand to excess.

**Seal coat:** **Sikafloor** coating to suit

## SURFACE PREPARATION

The cementitious substrate should be sound and of sufficient compressive strength. (Min 25 N/ mm<sup>2</sup>).  
Minimum pull off strength 1.5 N/mm<sup>2</sup>.

The surfaces must be dry and free of all contaminants eg oils, grease, surface treatments and coatings etc. The substrate must be prepared mechanically to achieve an open textured fine gripping surface, free of cement laitance. Weak concrete should be removed and surface defects such as blowholes and voids must be fully exposed.

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

Repairs to cementitious substrate and filling of blowholes levelling of irregularities etc should be carried out using an appropriate product from the **SikaDur**<sup>®</sup>, **Sikafloor**<sup>®</sup> or **SikaGard**<sup>®</sup> range of materials.

## MIXING

Shake component A (white liquid) then pour into component B and shake for 30 seconds. Then mix with component C thoroughly with a low speed electric stirrer (300 - 400 rpm) for a minimum of 3 minutes until a uniform mix has been achieved. Mix time is crucial to success.

## APPLICATION

Prior to application confirm substrate moisture content is ≤12% by weight or ≤95% RH.

Apply the appropriate primer for the situation, either **Sikafloor 155W** or **Sikafloor EpoCem Module**. **Sikafloor EpoCem Module** is used as a tack coat and if allowed to dry the area should be re-primed. Where 2 coats are required allow a minimum of 12 hours and a maximum of 36 hours between coats.

Apply mixed material to the primed surface and spread to required thickness by trowel. Immediately work with spiked roller to ensure even thickness and release of entrapped air.

If blinding with quartz aggregate (granulometry to suit) ensure that the minimum thickness of 2 mm of unbulked **Sikafloor 81 EpoCem** is not compromised as this will impair its ability to act as a DPM system.

## IMPORTANT NOTES

- \* Construction joints require pre treatment with a stripe coat. Contact **Sika Ltd** for further details.
- \* Always ensure good ventilation when using **Sikafloor 81 EpoCem** in a confined space.
- \* Quartz silica sand can be sprinkled on to **Sikafloor 81 EpoCem** then sealed to form a slip resistance surface.
- \* Freshly applied **Sikafloor 81 EpoCem** should be protected from damp, condensation and water for at least 24 hours.
- \* Avoid puddles on surface.
- \* Minimum thickness is 2 mm for use as vapour check layer.
- \* Do not add water to the mix.
- \* **Sikafloor 81 EpoCem** should normally be sealed.
- \* Pigmentation is possible with **EpoCem** pigment pastes.
- \* Protect from extremes of weather (cold/rain/snow) for at least 6-10 hours.
- \* When overcoating **Sikafloor 81 EpoCem** with self smoothing topping use appropriate product primer.
- \* When overcoating **Sikafloor 81 EpoCem** with coating, a primer is not normally required prior to coating.
- \* When overcoating **Sikafloor 81 EpoCem** with **Sikafloor** coating, check surface moisture content is ≤4%
- \* Differing temperatures at the time of application will affect the workability of the product. This can be improved by reducing component C by a maximum of 10% by wt.

## CLEANING EQUIPMENT

Use water. Hardened material may have to be mechanically removed.

## PACKAGING

Refer to latest price list

## CONSUMPTION

2.1 kg/m<sup>2</sup>/mm thickness. (These figures do not allow for surface porosity, profile or wastage).  
Maximum yield per pack - refer to latest price list.

## STORAGE AND SHELF LIFE

Minimum 1 year in sealed containers stored in dry warehouse conditions (+5°C - +25°C). Component C must be protected from humidity.

### 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 in 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, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

### Important Note

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 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 to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

Please consult our Technical Sales Department for further information

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