

## Sikafloor® Level-30

High performance, cementitious, self levelling and fast drying, cementitious screed for interior or exterior use - 4-30mm

<b>Positioning Description</b>	Sikafloor Level-30 is a polymer modified, pumpable, self levelling fast drying cementitious screed for higher thickness interior or outdoor floors, meeting the requirements of class R3 according to EN 1504 – 3.
<b>Uses</b>	<p>Sikafloor Level-30 is an all-purpose floor levelling compound to level or smooth screeds and concrete floors at a thickness between 4 - 30mm in one working step. Sikafloor Level-30 is useable as screed for industrial service conditions.</p> <p>From medium to high load (heavy-traffic + forklift pallet truck with impact load)</p> <ul style="list-style-type: none"><li>• Suitable for restoration work (Principle 3, method 3.1 of EN 1504-9)</li><li>• Suitable for structural strengthening (principle 4, method 4.4 of EN 1504-9)</li><li>• Suitable for preserving or restoring passivity (Principle 7, method 7.1 and 7.2 of EN 1504-9)</li></ul>
<b>Advantages</b>	<ul style="list-style-type: none"><li>• Self smoothing and highly fluid</li><li>• Easy to place by pump or manual application</li><li>• Sikafloor Level-30 is ready for use</li><li>• Low shrinkage</li><li>• Maintains good workability and joint healing throughout its pot life</li><li>• Fast setting and drying</li><li>• 3-4 hours walk on time (+20°C)</li><li>• Good surface appearance and hardness</li><li>• Very low VOC</li><li>• Can be extended 30-80mm as a ramping and heavy section repair mortar</li></ul>
<b>Approval / Standards</b>	<p>Initial type tests and factory production control carried out by Test Laboratory HARTL, in Seyring, Austria.</p> <p>Fire rating report, Ref. MA 39 – VFA 2009-1114.01 dated 24/08/2009 by the Testing, Monitoring and Certification Authority of the City of Vienna. Municipal Administration Department 39. VFA – Technical Construction Laboratory.</p> <p>Conforms to the requirements of EN 13813 CT – C40 – F10 – A12</p> <p>Conforms to the requirements of EN 1504-3 for principles 3 (CR), 4 (SS) and 7 (RP) as R3 mortar.</p>
<b>Product Data</b>	
<b>Colours</b>	Powder - Standard grey
<b>Packaging</b>	20kg bags
<b>Storage &amp; Shelf Life</b>	Nine (9) months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C.
<b>Technical Data</b>	
<b>Chemical Base</b>	Polymer modified rapid hardening cement.
<b>Density</b>	1.25kg/l ± 0.05 (bulk powder) 2.00kg/l ± 0.03 (fresh mortar)
<b>Layer Thickness</b>	4mm min. / 30 mm max.
<b>Thermal Expansion Coefficient</b>	$\alpha \approx 16.3 \cdot 10^{-6}$ per °C (Temperature range: -20°C to +40°C) (EN 1770)
<b>Water Absorption Coefficient W</b>	$W \approx 0.5 \text{ kg} / (\text{m}^2 \times \text{h}^{0.5})$ (EN 13057)

Construction



**Mechanical / Physical Properties**

Requirements according to EN 1504-3

	Results (ITT)	Requirements (R3)	Test methods
Compressive strength	40.2 N/mm <sup>2</sup> (MPa)	≥ 25 N/mm <sup>2</sup> (MPa)	EN 12190
Chloride ion content	0.0152%	≤ 0.05%	EN 1015-17
Adhesive strength	2.2 N/mm <sup>2</sup> (MPa)	≥ 1.5 N/mm <sup>2</sup> (MPa)	EN 1542
Controlled shrinkage	1.83 N/mm <sup>2</sup> (MPa) average	≥ 1.5 N/mm <sup>2</sup> (MPa)	EN 12617-4
Carbonation resistance	NPD (see foot noted, table 1, EN 1504-3)	$d_k \leq \text{control}$	EN 13295
Elastic Modulus	15.1 GPa	≥ 15 GPa	EN 13412
Skid resistance	Class III	Class I : > 40 units wet tested Class II : > 40 units dry tested Class III : > 55 units wet tested	EN 13036-4
Thermal Compatibility Part 1: Freeze-Thaw	2.25 N/mm <sup>2</sup> (MPa)	≥ 2.0 N/mm <sup>2</sup> (MPa)	EN 13687-1
Capillary Absorption	$0.5 \text{ kg} \cdot \text{m}^{-2} \cdot \text{h}^{-0.5}$	$\leq 0.5 \text{ kg} \cdot \text{m}^{-2} \cdot \text{h}^{-0.5}$	EN 13057
<b>Compressive Strength</b>	> 18 N/mm <sup>2</sup> (after 24 hours / +20°C) > 40 N/mm <sup>2</sup> (after 28 days / +20°C)		(EN 13892-2) (EN 13892-2)
<b>Flexural Strength</b>	> 3 N/mm <sup>2</sup> (after 24 hours / +20°C) > 10 N/mm <sup>2</sup> (after 28 days / +20°C)		(EN 13892-2) (EN 13892-2)
<b>Slip Resistance</b>	Slip Resistance Values		(ENV 12633:2003)
	Substrate	SRV Dry	SRV Wet
	Sikafloor Level-30	75	55
<b>Abrasion Resistance</b>	TRRL Pendulum, Rapra 4S Slider Class A 12 (12 cm <sup>3</sup> / 50 cm <sup>2</sup> wear ) acc. to Böhme AR 0.5 (< 50 µm) acc. to BCA RWA 100 (< 100 cm <sup>3</sup> ) acc. to RWA		(EN 13892-3) (EN 13892-4) (EN 13892-5)

**Resistance****Thermal Resistance** Suitable for use with under floor heating systems**System Information****System Structure***Levelling*

Apply to the required thickness 4 - 30mm.

*As a ramping and filling mortar 30-80mm*

Sikafloor Level 30 can be extended for use as a ramping and heavy section filling repair mortar.

Mix design: \*30-50mm

1 x 20kg Level 30

2-3kg Sikadur 505 Silica sand

\*50-80mm

Additional 5-10kg Sikafloor Extender aggregate

**Application Details****Consumption / Dosage**~ 1.8 ± 0.05 kg/m<sup>2</sup>/mm

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.

**Substrate Quality**The concrete substrate must be sound and of sufficient compressive strength (min. 25 N/mm<sup>2</sup>) with a minimum pull off strength of 1.5 N/mm<sup>2</sup>.

The surface must be clean, dry and free of all contaminants e.g. dirt, oils, grease, coatings and surface treatments etc.

If in doubt apply a test area first.

**Substrate Preparation / Priming**

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 must be carried out using appropriate products from the SikaTop, Sika MonoTop, 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 and/or vacuum.

For interior low to medium traffic application use Sikafloor Level Pro Primer. For heavy traffic and exterior applications use Sikafloor Epocem Module.

*Alternative:*

If the substrate is strong and has a sufficiently rough texture, Sikafloor Level-30 can be applied directly onto the substrate. Avoid bubbles by dampening the substrate until a SSD (Saturated Substrate Dry) condition is achieved.

If the SSD option is chosen, the mechanically prepared concrete must then be thoroughly dampened during the 24 hours prior to the screed application by keeping at least 4 - 5mm of water on the surface and letting it soak into the substrate. Remove the excess water prior to laying the screed. Any pores which may appear on the screed would mean that the substrate was not sufficiently saturated.

## Application Conditions / Limitations

**Substrate Temperature** +8°C min. / +30°C max.

**Ambient Temperature** +8°C min. / +30°C max.

**Substrate Moisture Content** The substrate can be in a SSD condition, but there must be no rising moisture prior to the dampening operation according to ASTM D 4263 (Polyethylene-sheet test).

**Relative Air Humidity** < 75% max.

Beware of condensation!

The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation, blooming or cement laitance on the floor finish.

## Application Instructions

### Mixing

When mixing manually place 3.7-3.9 litres of cool water into a suitable sized vessel. Add a full bag (20kg) of Sikafloor Level-30 powder slowly to the water, mixing continuously.

After mixing leave the material to stand in the container for two or three minutes until the majority of air bubbles have dispersed.

### Mixing Time

Mix thoroughly for a minimum of 3 minutes.

### Mixing Tools

Use an electric stirrer (< 500 rpm).

### Application Method / Tools

*Pump:*

Use a conventional floor screed dual stage mixer and pump and control the water dosage to achieve the required flow, measuring the final average flow diameter on a flat, clean, dry flow table.

Cylinder according to EN 12706:2000	ASTM C 230-90 / EN 1015-3
Internal diameter: 30mm	Top internal diam: 70mm
Height: 50mm	Bottom internal diam.: 100mm
	Height: 60mm
Flow = 130mm ± 5mm (5.25 litre per 25kg)	Flow = 340mm ± 10mm (5.25 litre per 25kg)

After placing onto the surface, apply by trowel or pin screed rake to the required thickness.

The use of a spiked roller is not essential but it is recommended.

Roll thoroughly with a spiked roller in two directions to remove any entrapped air.

*Manual:*

Pour the mixed material onto the primed surface and apply by trowel or pin screed rake to the required thickness. Roll thoroughly with a spiked roller in two directions to remove any entrapped air.

### Cleaning of Tools

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

### Potlife

Conditions	Time
+23°C / 50% r.h.	25 minutes

The temperature will affect the pot life.

Application at temperatures above +23°C will reduce the pot life and the working time. Temperatures below +23°C will increase the pot life and extend the working time.

## Waiting Time / Overcoating

Suitable for overcoating with impermeable or moisture sensitive coatings after :

Product thickness	Waiting time
Layer thickness up to 15mm:	~ 24h
Layer thickness up to 30mm:	~ 48h

Times are approximate and at +23°C and 50% r.h. and thus will be affected by changing substrate and ambient conditions, particularly the temperature and relative humidity.

When overcoating Sikafloor Level-30 always ensure the moisture content has achieved the required value for the coating product, as the waiting time will vary with the application thickness and ambient humidity.

(Refer to the top coat product data sheet)

## Notes on Application / Limitations

Very absorbent substrates must be saturated with water or primed to prevent loss of the mixing water into the substrate and which can cause problems such as shrinkage, the appearance of surface pores or weak and dusty surfaces etc.

Do not mix with other cements or cement based screeds.

No loading for at least 3 hours.

Freshly applied Sikafloor Level-30 must be protected from damp, condensation and water for at least 24 hours.

Do not exceed the recommended water dosage. Do not add more water when the product is starting to set.

Do not exceed the recommended thicknesses.

Due to the natural variability of the raw materials of the self-levelling screeds, the finished surface may present some colour variations.

To ensure optimum of colour consistency, it is essential that the floor laying operation is as clean and protected from the environment as possible.

The surface must be sealed for a final floor finish when applied outside for best curing and aesthetic appearance.

Temperatures below +20°C extend the drying times.

Not suitable for slopes or inclines > 0.5%.

Protect from direct sunlight, hot or strong winds and extremes of temperature to avoid cracking or crazing. These small superficial hairline cracks or crazing is normal occurrence under these conditions and do not constitute a reason for claim.

When overcoating with SikaCeram or Sikabond adhesives (or others), or Sikafloor resins, additional mechanical preparation may be required to remove any cement laitance which may have formed during application due to excessive water in the mix or high ambient moisture causing bleeding.

The thickness of the levelling mortar has to be at least 4mm when using water-based adhesives under impermeable or vapour tight floor finishes.

## Curing Details

Applied Product ready for use

At +20°C and 50% r.h.

Foot traffic	~ 3 hours
Lightly serviceable	~ 24 hours
Fully serviceable	~ 7 days

Note: Times are approximate and will be affected by changing substrate and ambient conditions, particularly the temperature and relative humidity.

## Value Base

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.

## Health and Safety Information

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

Sentences required according to Blue Angel seal scope of use:

- Keep out of reach of children
- Ensure good ventilation during and after application and drying
- Avoid eating, drinking or smoking while processing this product
- In case of contact with eyes or skin rinse immediately with plenty of water.
- Do not allow product to reach sewage system or any water course. Do not allow to penetrate the ground/soil
- Only properly emptied containers may be recycled. Dried product residues can be disposed of as normal household waste

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- Wear protective gloves
- Storage conditions: Keep in dry and cool place. Reseal container tightly immediately after use

## 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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