

PRODUCT DATA SHEET

Sikafloor® Level-30

HIGH PERFORMANCE, SELF LEVELLING AND FAST DRYING, CEMENTITIOUS SCREED FOR INTERIOR OR EXTERIOR IN 4 – 30 MM



PRODUCT DESCRIPTION

Sikafloor® Level-30 is a polymer modified, pumpable, self levelling fast drying cementitious screed for higher thickness interior or exterior floors, meeting the requirements of class R3 according to EN 1504-3.

USES

Sikafloor® Level-30 is an floor self levelling screed 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 when sealed with a PU or EP resin top coat from medium to high load (heavy-traffic + forklift pallet truck with impact load)

Sikafloor® Level-30 is also suitable for filling, smoothing and levelling of suitable substrates before applying parquet, ceramic tiles, seamless resin floors, textile, elastic floor coverings

Sikafloor® Level-30 is useable as screed for exterior areas when sealed with a covering e.g. a coating.

- Suitable for restoration work (Principle 3, method 3.1 of EN 1504-9).
- Suitable for structural strengthening (principle 4, method 4.4 of EN 1504-9).
- Suitable for preserving or restoring passivity (Principle 7, method 7.1 and 7.2 of EN 1504-9).

CHARACTERISTICS / ADVANTAGES

- Self smoothing and highly fluid
- Easy to place by pump or manual application
- Ready for use.
- Low shrinkage.
- Maintains good workability and joint healing throughout its pot life
- Fast setting and drying
- 3-4 hours walk on time (+20 °C)
- Good surface appearance and hardness
- Excellent freeze-thaw salt resistance. (R3)
- Casein and Formaldehyde free
- Suitable for use with under floor heating systems

ENVIRONMENTAL INFORMATION

- EC 1plus R: Very low emissions.

APPROVALS / STANDARDS

- Cement based screed CT-C40-F10-A12 according to EN 13813, declaration of performance 90432755, and provided with CE marking
- Cement based screed A1/A1fl according to EN 13813, declaration of performance 90432755, assessed by notified laboratory 1140, and provided with CE marking
- Cement based screed class R3 for the principles 3 (CR), 4 (SS) and 7 (RP) according to EN 1504-3, declaration of performance 36581792, assessed by notified laboratory 1139, and provided with CE marking

PRODUCT INFORMATION

Chemical Base	Polymer modified rapid hardening cement.
Packaging	25 kg bags
Appearance / Colour	Powder - beige-grey

Shelf Life	9 months from date of production
Storage Conditions	stored properly in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C.
Density	~ 2.0 kg/l
Bulk Density	~ 1.25 kg/l

TECHNICAL INFORMATION

Abrasion Resistance

Class	Value	Method	
A12	12 cm ³ / 50 cm ²	Böhme	(EN 13892-3)
AR 0.5	< 50 µm	BCA	(EN 13892-4)
RWA 100	< 100 cm ³	RWA	(EN 13892-5)

Compressive Strength

Time	Temperature	Value	(EN 13892-2)
24 hours	20 °C	~ 20 N/mm ²	
28 days	20 °C	≥ 40 N/mm ²	

Flexural Strength

Time	Temperature	Value	(EN 13892-2)
24 hours	20 °C	~ 3 N/mm ²	
28 days	20 °C	≥ 10 N/mm ²	

Tensile adhesion strength

Time	Temperature	Value	(EN 13892-8)
28 days	+20 °C	≥ 1.5 N/mm ²	

Coefficient of Thermal Expansion

$\alpha \sim 16.3 \times 10^{-6} / ^\circ\text{C}$ (for temperature range -20 °C and +40 °C)	(EN 1770)
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Water Absorption

$W \sim 0.5 \text{ kg} / (\text{m}^2 \times \text{h}^{0.5})$	(EN 13057)
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SYSTEM INFORMATION

System Structure

Priming	See substrate pre-treatment
Levelling	Apply to the required thickness 4–30 mm
Sealer	Sikafloor®-304W, -305W and -2540W
Coatings	All kinds Sikafloor® EP and PU coatings
Adhesives	Sikabond® -T52, -T54 , -T54FC eg. SikaCeram® product range for the tile adhesives

APPLICATION INFORMATION

Mixing Ratio	5 to 5.25 L water for 25 kg Sikafloor® Level-30
Consumption	~ 1.8 kg/m ² /mm
Layer Thickness	4 - 30 mm
Ambient Air Temperature	≥ +10 °C and ≤ +25 °C
Relative Air Humidity	< 75 %
Substrate Temperature	≥ +10 °C and ≤ +25 °C

Substrate Pre-Treatment

Normal intended use of the floor

The one part acrylic primer Sikafloor®-01 Primer is recommended for a pore free surface with very good surface adhesion. Refer to the relevant PDS for the recommended application details etc.

High loads intended use of the floor

Priming with epoxy resins such as Sikafloor® -155WN, Sikafloor® -150 or Sikafloor® -151 fully broadcast with quartz sand 0.3–0.8 mm.

Pot Life

Temperature and Relative Air Humidity

+23 °C / 50%

Time

~ 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

Covering

Impermeable or moisture sensitive coatings

Layer Thickness

≤ 15 mm

Waiting Time

24 hours¹

Impermeable or moisture sensitive coatings

≤ 30 mm

48 hours¹

Ceramic covering

≤ 30 mm

24 hours

1. 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 coating product data sheet)

Applied Product Ready for Use

At +20 °C and 50% r.h.

Foot traffic

~ 3 hours

Lightly serviceable

~ 24 hours

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

SUBSTRATE QUALITY / PRE-TREATMENT

- The concrete substrate must be sound and of sufficient compressive strength ($> 25 \text{ N/mm}^2$) with a minimum pull off strength of 1.5 N/mm^2 .
- 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.
- Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.
- Cement laitance, paints or other surface treatment agents must be completely removed.
- Suitable methods for surface preparation are high pressure water jetting or abrasive blast cleaning. Other pretreatments such as scarifying, milling, etc. must necessarily be followed by a Jet/blast method to eliminate the remaining structural faults, this to remove cement laitance and achieve an open and sound textured surface.
- Prerequisite for a good bond between the substrate and levelling screed is an appropriate roughness of the substrate. The mean surface roughness should be as large as possible, but at least 1mm.

- 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.
- Dewpoint: 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 laitance on the floor finish.
- A suitable one part acrylic primer such as Sikafloor® -01 Primer.
- High mechanical forces on the floor, a floor placed on soil or poor weak substrates must be primed with Sikafloor®-150 or Sikafloor® -151 fully broadcast with quartz sand 0.3 – 0.8 mm. Remarks; quartz sand not applied in excess and grains must not be fully sealed with the resin.
- Do not apply on substrates with rising moisture. If rising moisture can occur an effective damp proof membrane must be applied and be in compliance with the relevant national standard.

Product Data Sheet

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MIXING

By Hand

For 25 kg Sikafloor® Level-30 is required 5 to 5.25 l water. When mixing manually add the dry powder (25 kg) into a container with the clean water.

Mix thoroughly for a minimum of 3 minutes, by use of an electric stirrer, recommended is the use of a double disc stirring paddle or a spiral mix paddle (< 500 rpm). maturing time: After mixing leave the material to stand in the container for ~ 2 minutes until the majority of air bubbles have dispersed.

Pumping

When using a mortar pump with appropriate equipment (Putzmeister MP 20/25, DuoMix 2000 or PFT G5 FE) set the machine in a way that a uniform mixture is achieved. The use of a remixer is recommended. Control the water dosage to achieve the required flow, measuring the final average flow diameter on a flat, clean, dry flow table.

Tool	Flow	Standard
Ø = 30 mm H = 50 mm	130 mm ± 5 mm	EN 12706
Ø 70 / 100 mm H = 60 mm	355 mm ± 10 mm	ASTM C 230-90 EN1015-3
Ø = 60 mm H = 120 mm	290 mm ± 10 mm	Sika AT method

APPLICATION

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. Best application time would be during falling temperatures.

CLEANING OF TOOLS

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

LIMITATIONS

- Very absorbent substrates must be primed or saturated with water 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.
- Raw material-related variations in the color, texture, pores on the surface are in mineral systems (floor leveling compounds) normal and no reason for complaint. Also under certain circumstances (drafts, sunlight, low humidity, etc.) fine "hairline cracks" can be expected.
- 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 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), additional mechanical preparation may be required to remove any cement laitance which may have formed during application.
- A preliminary test area is recommended when other products are used for covering.
- Contact with vertical structures should be avoided by putting in a perimeter isolating strip.
- The thickness of the levelling mortar has to be at least 4mm when using water-based adhesives under impermeable or vapour tight floor finishes.
- When used as R3 repair for carbonation protection, Sikafloor® Level-30 must always be used in combination with a suitable coating.

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.

LOCAL RESTRICTIONS

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

ECOLOGY, HEALTH AND SAFETY

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.

GISCODE

ZP-1 - cement products, low in chromate.

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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