Product Data Sheet
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Identification no:
01 08 03 01 008 0 000022
Sikafloor® Level -30

CE **EN 13813** **08** **1139 - CPD - 1234**
EN 1504-3 **08**

Sikafloor® Level -30

High performance, cementitious, self levelling and fast drying, cementitious screed for indoor or outdoor use in 4 – 30mm

Construction

Product Description

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.

Uses

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 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 ready for use.

Characteristics / Advantages

- Self smoothing and highly fluid
- Easy to place by pump or manual application
- 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
- Very low emissions. – EC1

Tests

Approval / Standards

Conforms to the requirements of EN 13813 CT – C40 – F10 – A12

Conforms to the requirements of EN 1504 – 3 for principles 3.1, 4.4 and 7.2 as R3 mortar. Initial type tests and factory production control carried out by Test Laboratory HARTL, in Seyring, Austria.

Product Data

Form

Appearance / Colours	Powder Standard grey
Packaging	25 kg bags

Storage

Storage Conditions / Shelf Life	6 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.

Technical Data

Chemical Base	Polymer modified rapid hardening cement.	
Density	1.25 kg/l ± 0.05 (bulk powder) 2.00 kg/l ± 0.03 (fresh mortar)	
Layer Thickness	4 mm min. / 30 mm max.	
Thermal Expansion Coefficient	$\alpha \approx 16.3*10^{-6}$ per °C (Temperature range: -20°C to +40°C)	(EN 1770)
Water Absorption Coefficient W	$W \approx 0.53$ kg / (m^2 x $h^{0.5}$)	(EN 13057)

Mechanical / Physical Properties

Compressive Strength	> 20 N/mm² (after 24 hours / +20°C) > 40 N/mm² (after 28 days / +20°C)	(EN 13892-2) (EN 13892-2)
Flexural Strength	> 3 N/mm² (after 24 hours / +20°C) > 10 N/mm² (after 28 days / +20°C)	(EN 13892-2) (EN 13892-2)
Bond Strength	> 1.5 N/mm² (after 28 days / +20°C)	(EN 13892-8)
Thermal compatibility / Freeze-Thaw cycle	2.25 N/mm² (Adhesion alter 50 cycles)	(EN 13687-1)
Abrasion Resistance	Class A 12 (12 cm³ / 50 cm² wear) (Böhme abrasion)	(EN 13892-3)

Resistance

Thermal Resistance	Suitable for use with under floor heating systems

System Information

System Structure	Priming The one part acrylic primer Sika® -Level-01 Primer is recommended for a pore free surface with very good surface adhesion. Refer to the relevant Product Data Sheet for the recommended application details etc. Priming with epoxy resins such as Sikafloor® -155WN, Sikafloor® -156 or Sikafloor® -161 fully broadcast with quartz sand 0.4 – 0.7 mm, is also possible. Levelling Apply to the required thickness 4 - 30 mm.

Application Details

Consumption / Dosage	~ 1.8 ± 0.05 kg/m^2/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^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.
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®, and SikaDur® 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. A suitable one part acrylic primer such as Sika® -Level-01 Primer, or a two part epoxy primer such as Sikafloor® -156 or Sikafloor® -161, can be used to ensure sealing of the substrate to prevent the appearance of bubbles/pinholes on the screed surface and improve the bond to the substrate. Refer to the relevant Product Data Sheet. Alternative: If the substrate is dense and has a sufficiently rough texture to provide the required bond, Sikafloor®-Level 30 can be applied directly onto the substrate by dampening the substrate until a SSD (Saturated Substrate Dry) condition is achieved. Poor or weak substrates must be primed with Sikafloor®-156 or Sikafloor® -161 fully broadcast with quartz sand 0.4 – 0.7 mm.

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) When using epoxy primers, the surface must be dry with less than 4% for Sikafloor® -156 and 6% for Sikafloor® -161 or Sikafloor® -155WN For further information please refer to the Product Data Sheet of the primer used.
Relative Air Humidity	< 75% max.
Dew Point	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 add the dry powder (25 kg) into a container with the clean water. The water required is 25 - 26% or between 5 and 5.25 l per 25 kg bag of mortar-powder. 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.

ASTM C 230-90 / EN 1015-3	
Top internal diam:	70 mm
Bottom internal diam.:	100 mm
Height:	60 mm
Flow = (5.25 l per 25 kg)	355 mm ± 10 mm

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 +23ºC will increase the pot life and extend the working time.

Waiting Time / Overcoating

Suitable for overcoating with impermeable or moisture sensitive coatings after :

- Layer thickness up to 15mm: 24h*
- Layer thickness up to 30mm: 48h*
- Layer thickness up to 40mm: 72h*

* Times are approximate and at +23ºC 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), additional mechanical preparation may be required to remove any cement laitance which may have formed during application.

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.

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.

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.

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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.

CE Labelling

The harmonized European Standard EN 13 813 „Screed material and floor screeds - Screed materials - Properties and requirements“ specifies requirements for screed materials for use in floor construction internally.

Structural screeds or coatings, i.e. those that contribute to the load bearing capacity of the structure, are excluded from this standard.

Resin floor systems as well as cementitious screeds fall under this specification. They have to be CE-labelled as per Annex ZA. 3, Tables ZA. 1.1 or 1.5 and Z.A. 3.3 and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

CE	
Sika Österreich GmbH Dorfstrasse 23 Postfach 168 AT-6700 Bludenz-Bings Austria	
08 [1)]	
EN 13813 CT – C40 – F10 – A12	
Cementitious screed material for indoors in buildings (systems as per Product Data Sheet)	
Reaction to fire:	$A1_{(fl)}$
Release of corrosive substances (Cementitious Screed):	CT
Water permeability:	NPD[2)]
Water vapour permeability:	NPD
Compressive strength:	C 40
Flexural strength:	F10
Abrasion:	A12
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD

[1)] Last two digits of the year in which the marking was affixed.

[2)] No performance determined.

Construction

CE Labelling

The harmonized European Standard EN 1504-3 „Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 3 : Structural and non-structural repair.

Products which fall under this specification have to be CE-labelled as per Annex ZA. 1, Tables ZA1, according to the scope and relevant clauses there indicated, and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

For flooring systems not dedicated to protect or reinstate the integrity of a concrete structure, EN 13813 applies. Products acc. EN 1504-3 used as flooring systems with mechanical loads also must fulfil EN 13813.

Here below indicated are the performance classes achieve according to the standard. For the specific performance results of the product to the particular tests, please see the actual values above in the PDS.

CE	
1139	
Sika Österreich GmbH Dorfstrasse 23 Postfach 168 AT-6700 Bludenz-Bings Austria	
08 [1]	[1]
1139 - CPD – 1234 - 08	
EN 1504-3	
Repair Systems for Concrete Concrete repair products for structural repair PCC mortar (based on polymer hydraulic cement mortar) for principles 3.1, 4.4, 7.1 and 7.2 as R3 mortar	
Compressive strength	≥ 25 MPa
Chloride ion content	≤ 0.05%
Adhesive bond	≥ 1.50 N/mm^2
Carbonation resistance	NPD
Elastic modulus	≥ 15 GPa
Thermal compatibility / Freeze-Thaw Part I	≥ 1.50 N/mm^2
Slip/skid resistance – (pendulum test)	
Capillary absorption	≤ 0.5 kg*m^{-2}*h$^{-0,5}$
Reaction to fire	A1$_{fl}$

[1] Last two digits of the year in which the marking was affixed.
[2] No performance determined
[3] Tested as part of a full system

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ISO 14001 ISO 9001