

Product Data Sheet
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Sikafloor®-Level-25

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Cementitious self smoothing industrial sub-floor screed

Product Description Sikafloor®-Level-25 is a one part, polymer modified, pumpable self smoothing cementitious industrial grade screed.

Uses

- Sikafloor®-Level-25 is a versatile and durable sub-floor cementitious screed which can be applied manually or by pump to achieve rapid, flat, economic substrate levelling prior to the application of the final floor finish
- Typical uses are in warehouses, factories, manufacturing facilities, hospitals, commercial buildings, even residential and domestic properties etc.
- For "weekend" floor repairs
- Levelling pre-cast concrete planks

Characteristics / Advantages

- Self smoothing and highly fluid
- Pumpable or manual application
- Rapid drying
- 4 hour walk on time (approx. at +20°C)
- Levels and renovates old floors
- Excellent underlay for resin flooring, tiles and sheet systems
- Low odour
- Protein free

Tests

Approval / Standards All values indicated are internal test results according to EN 13892-2 and EN 13892-8.

Conforms to the requirements of a EN 13813 CT - C35 - F5 - AR2 mortar.

UK Aston University, Report N°: SA/AR 251004/L25, dated October, 2005
Abrasion Resistance.

Product Data

Form

Appearance / Colours Powder
Standard grey (No pigment)
Other colours upon request: Light grey, Mid grey, Green, Red, Plum and Beige

Packaging 25 kg bags

Storage

Storage Conditions / Shelf Life 6 months from date of production if stored properly in original, unopened and undamaged packaging in dry conditions at temperatures between +5°C and +30°C.

Construction



Technical Data

Chemical Base	Polymer modified Portland cement.	
Density	2.15 kg/l (wet) 1.77 kg/l (dry)	
Layer Thickness	5 mm min. / 25 mm max.	
Mechanical / Physical Properties		
Compressive Strength	> 15 N/mm ² (after 24 hours / +20 °C) > 35 N/mm ² (after 28 days / +20 °C)	(EN 13892-2) (EN 13892-2)
Flexural Strength	> 5.0 N/mm ² (after 28 days / +20 °C)	(EN 13892-2)
Bond Strength	> 1.5 N/mm ² (after 28 days / +20 °C)	(EN 13892-8)
Abrasion Resistance	Class "AR2" High abrasion resistance. (Less than 0.2 mm wear depth)	(EN 13892-4)

System Information

System Structure

Final Top Surface	Substrate Priming System	Screed Layer	Multi-layer Bonding Primer	Topping
Uncoated or open for water vapour diffusion	Sikafloor®-155 WN (~ 0.3 kg/m ²) fully blinded with quartz sand (0.6 - 1.2 mm or 0.4 - 0.7 mm) Sand consumption: more than 2 kg/m ²	Sikafloor®-Level-25	Sikagard®-552 W Aquaprimer (0.1 - 0.2 l/m ²), wet on wet)	Nothing or vapour permeable system
	Sikafloor®-155 WN (0.3 - 0.5 kg/m ²) Ensure primer is 2.5 to 4 hours old for "wet on tacky" screed layer application (always scabble the surface prior to the primer application)			
Sealed with an impervious system (resin/sheet/tile) (Where a DPM is already existing)	Sikafloor®-156 or Sikafloor®-261 (~ 0.3 kg/m ²) fully blinded with quartz sand (0.6 - 1.2 mm or 0.4 - 0.7 mm) Sand consumption: more than 2 kg/m ²			Sikafloor Primer + Sikafloor Resin System ----- Conventional Sheet/Tile System

Application Details

Consumption	~ 1.77 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	<p>Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.</p> <p>Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.</p> <p>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.</p> <p>All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.</p> <p>If to be sealed with an impervious material, ensure that an effective damp proof membrane is in place before installation of Sikafloor[®]-Level-25.</p> <p>Prime the substrate using the appropriate primer (see system table), and if broadcasting quartz sand, ensure full blinding of the wet primer, without any bald spots. Remove any excess or loose sand from the surface when cured.</p>
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Application Conditions / Limitations

Substrate Temperature	+10°C min. / +30°C max.
Ambient Temperature	+10°C min. / +30°C max.
Substrate Moisture Content	<p>Test method: Sika-Tramex meter or CM-measurement.</p> <p>No rising moisture according to ASTM D 4263 (Polyethylene-sheet test).</p> <p>< 4% pbw if priming with Sikafloor[®]-156.</p> <p>< 6% pbw if priming with Sikafloor[®]-155 WN.</p> <p>For further information please consult the Product Data Sheet of the primer used.</p>
Relative Air Humidity	~ 80% max.
Dew Point	<p>Beware of condensation!</p> <p>The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish.</p>

Application Instructions

Mixing	<p>Add the dry powder (25 kg) into a mixing container with clean water. The water amount must be between 4.8 - 5.25 l per 25 kg of material.</p> <p>When overcoating with a Sikafloor[®] resin, the ratio must be 4.8 l per 25 kg of material. When overcoating with a tile or sheet flooring system, 5.25 l per 25 kg of material can be used.</p> <p>Leave material to stand in container until the majority of air bubbles have dispersed.</p>
Mixing Time	Mix thoroughly for a minimum of 3 minutes.
Mixing Tools	Use a low speed electric stirrer (300 - 400 rpm).

Application Method / Tools*Pump:*

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

Standard Flowcone:	ASTM C 230 EN 1015-3
Internal diameter: 45 mm Height: 68 mm	Top internal diam.: 70 mm Bottom internal diam.: 100 mm Height: 60 mm
Standard type flow = 220 mm (5.25 l per 25 kg)	Standard type flow = 325 mm ± 25mm (5.25 l per 25 kg)
Coloured type flow = 205 mm ± 5 mm (5.25 l per 25 kg)	Coloured type flow = 300 mm ± 25 mm (5.25 l per 25 kg)

After placing onto the primed surface apply by trowel or pin screed rake to the required thickness. Thoroughly spike roll 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. Thoroughly spike roll 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 mechanically removed.

Potlife

Temperature	Time
+10 °C	min. 25 minutes
+20 °C	min. 20 minutes
+30 °C	min. 10 minutes

The temperature will affect the pot life.

Application at temperatures above +20 °C will have reduced pot life and working time. Temperatures below +20 °C will increase the pot life and working time.

Waiting Time / Overcoating

Before applying the following coating types, allow:

Product type	Waiting time
Water based materials	min. 8 hours
Solvent free materials	min. 24 hours
Solvent containing materials	min. 36 hours

Times are approximate at 20°C and 50% r.h. and will be affected by changing substrate and ambient conditions, particularly temperature and relative humidity.

Make sure the moisture content has achieved the required value for the application of the coating product.

Notes on Application / Limitations

Freshly applied Sikafloor®-Level-25 must be protected from damp, condensation and water for at least 24 hours.

Do not exceed the recommended water dosage.

Temperatures below +20 °C extend the drying times.

Sikafloor®-Level-25 does not provide an aesthetic finish. Product must always be overcoated.

Do not use Sikafloor®-Level-25 in areas where it can be exposed to dampness, such as underground floors without an effective damp proof membrane, or outdoors without suitable watertight overcoating and underside membrane.

Make sure the primer is fully blinded with aggregate and no “bald patches” remain.

Make sure the Sikafloor®-155 WN primer is between two and a half to four hours old (at +20°C) when applying the Sikafloor®-Level-25 without broadcasting over the primer. Always apply over a previously scabbled substrate.

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.

When overcoating with Sikafloor® resins, additional mechanical preparation may be required to remove any laitance which may have formed during application.

Any subsequent layers of Sikafloor®-Level-25 must be bonded within 24 hours of application of first layer by priming with Sikagard®-552 W Aquaprimer, applying enough material to form a tack coat. Application has to be executed wet on wet.

For sections > 12 mm thickness, to achieve maximum aesthetics and optimum deaeration with the spiked roller, use a 5 mm (approx.) top layer.

If a clear coating is to be used or the screed is to be left unsealed (not recommended) a coloured grade can be used.

When overcoating Sikafloor®-Level-25 ensure the moisture content has achieved the required value for the coating product, as times will vary with application thickness and ambient humidity. (Refer to the top coat product data sheet)

Sikafloor®-Level-25 can be submitted to demanding weather conditions like water + frost, extreme temperatures and/or wet conditions only when completely sealed with e.g. Sikafloor®-261 or comparable, and with an existing DPM from below. For occasional exposure (wet cleaning), protection can also be provided with two coats Sikafloor®-2530 W. In all circumstances proper sealing of joints with other construction elements (walls, columns) and expansion joints using e.g. Sikaflex® Pro-3WF must be ensured to prevent any ingress of water into Sikafloor®-Level-25.

Curing Details**Applied Product ready for use**

At +20°C and 50% r.h.

Foot traffic	~ 4 hours
Lightly serviceable	~ 24 hours
Fully serviceable	~ 7 days

Note: Times are approximate and will be affected by changing substrate and ambient conditions, particularly 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 should 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 Limited Watchmead Welwyn Garden City Hertfordshire AL7 1BQ United Kingdom	
05 ¹⁾	
EN 13813 CT - C35 - F5 - AR2	
Cementitious screed material for indoors in buildings (systems as per Product Data Sheet)	
Reaction to fire:	A2 _(fl)
Release of corrosive substances (Cementitious Screed):	CT
Water permeability:	NPD ²⁾
Water vapour permeability	NPD
Compressive strength	C35
Flexural strength	F5
Abrasion:	AR2
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



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