

**Product Data Sheet**  
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SikaLevel 20 Levelling Compound

## SikaLevel 20 Levelling Compound

High performance, floor levelling and fast drying, cementitious screed for indoor use 6mm to featheredge. Domestic to Light Commercial.

<b>Product Description</b>	SikaLevel-20 Levelling <b>Compound</b> is a 1-part ready to use protein free cement based self leveller for floor smoothing and levelling uneven rigid internal floors prior to applying final wearing coverings such as carpets, sheet vinyl, lino, tiles, laminates and timber.
<b>Uses</b>	SikaLevel-20 Levelling Compound is a floor levelling compound to level or smooth screeds and concrete floors at a thickness between 6mm to featheredge. Suitable for foot traffic only
<b>Characteristics / 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>■ SikaLevel-20 Levelling Compound 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>■ 2 -4 hours walk on time (+20°C)</li><li>■ Good surface appearance and hardness</li><li>■ Excellent freeze-thaw salt resistance</li><li>■ Protein and Formaldehyde free</li><li>■ Underfloor heating applications beneath heating cables/pipes or on top of heated screeds</li></ul>
<b>Environmental Information</b>	
<b>Tests</b>	
<b>Approval / Standards</b>	Conforms to the requirements of EN 13813 C30 – F7
<b>Product Data</b>	
<b>Form</b>	
<b>Appearance / Colours</b>	Powder - Standard grey
<b>Packaging</b>	25 kg bags
<b>Storage</b>	
<b>Storage Conditions / Shelf Life</b>	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 +35°C.



## Technical Data

<b>Chemical Base</b>	Rapid hardening cement.
<b>Density</b>	2.09 kg/l ± 0.03 (fresh mortar)
<b>Layer Thickness</b>	Featheredge - 6mm.

## Mechanical / Physical Properties

Requirements according to EN 1504-3		
	Results (ITT)	Test methods
<b>Compressive strength</b>	30 N/mm <sup>2</sup> (MPa)	EN 12190
<b>Adhesive strength</b>	1.8N/mm <sup>2</sup> (MPa)	EN 13892

  

<b>Compressive Strength</b>	> 15 N/mm <sup>2</sup> (after 24 hours / +20°C) > 30 N/mm <sup>2</sup> (after 28 days / +20°C)	(EN 13892-2) (EN 13892-2)
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## Resistance

<b>Thermal Resistance</b>	Suitable for use with under floor heating systems (not for embedment)
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## System Information

<b>System Structure</b>	<p>Priming The one part acrylic primer Sika® -Level-01 Primer is recommended for a pore free surface with very good surface adhesion. Please refer to the relevant PDS for the recommended application details etc. SikaBond PVA (1 part PVA to 4 parts clean water) may also be used</p> <p>Levelling Apply to the required thickness up to 6mm</p>
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## Application Details

<b>Consumption / Dosage</b>	<p>25kg will cover approx. 5m<sup>2</sup> @ 3mm thickness</p> <p>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.</p>
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<b>Substrate Quality</b>	<p>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 possess an effective damp proof membrane.</p> <p>The surface should be free from residual adhesives, damp proof membranes, oil, grease, wax, loose flaky paint, dust, laitance etc. that could reduce adhesion.</p> <p>Switch off underfloor heating 24 hours before and after application.</p> <p>Ensure floor temperature is &gt;5°C.</p> <p>If in doubt apply a test area first.</p>
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<b>Substrate Preparation /</b>	Weak concrete must be removed and surface defects such as blow holes and voids
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## Priming

must be fully exposed.

Repairs to the substrate, filling of blowholes/voids must be carried out using appropriate products such as Sika Concrete Repair Mortar.

**Normal Concrete / Screed** If the substrate is strong and has a sufficiently rough texture, SikaLevel 20 Levelling Compound 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 – 5 mm 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.

**Porous / Concrete Screed** 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. Please refer the relevant PDS. or alternatively seal the surface with SikaBond® PVA (1 part PVA to 4 parts clean water) ensuring surface is well coated, then allow to dry.

For highly porous substrates it may be necessary to apply more than one coat to prevent pinholes and cracking / debonding of SikaLevel-20 Levelling Compound.

**Non Porous/Dense Substrates** (quarry/ceramic tiles, terrazzo and smooth concrete etc) Mechanically roughen surfaces by grinding or scarifying to provide a mechanical key - specialist advice and machinery may be required.

Alternatively, apply a bonding coat of undiluted **SikaBond® PVA** and allow to become tacky before applying levelling compound

## Application Conditions / Limitations

**Substrate Temperature** +8°C min. / +35°C max.

**Ambient Temperature** +8°C min. / +35°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)

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

#### Unfilled (up to 6mm thick)

Mix SikaLevel-20 Levelling Compound with clean water only, slowly adding 5 parts powder to 1 part water (25kg powder will require 5 litres / 5kg of water). Mix in a suitable clean container using a mechanical mixer with a spiral mixing paddle at slow speed until fully mixed and a smooth consistency achieved. Occasionally during hot weather the product may require remixing during the 15 - 20 minute pot life to reactivate the self levelling characteristics. DO NOT add extra water. Discard any unused material after 20 minutes from initial mixing.

### 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 $\pm$ 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.	15 - 20 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 10mm:	~ 24h

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 SikaLevel-20 Levelling Compound 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)

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## Curing Details

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### 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.

### 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 / cement based screeds or Anhydrite screeds

Not suitable as an underfloor heating embedment layer

No loading for at least 3 hours.

Freshly applied SikaLevel -20 Levelling Compound 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.

Not suitable for application over wood / timber or bitumen substrates.

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. Small superficial hairline cracking or crazing is a normal occurrence, and 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.

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## 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.

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## 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.

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## 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.

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## 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

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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):

<b>CE</b>	
Sika Ltd Watchmead Welwyn Garden City Hertfordshire AL7 1BQ United Kingdom	
09 <sup>1)</sup>	
EN 13813 CT C30 F6	
Cementitious screed material for indoors in buildings (systems as per Product Data Sheet)	
Reaction to fire:	F
Release of corrosive substances (Cementitious Screed):	CT
Water permeability:	NPD <sup>2)</sup>
Water vapour permeability:	NPD
Compressive strength:	C 30
Flexural strength:	F7
Abrasion:	NPD
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD

<sup>1)</sup> Last two digits of the year in which the marking was affixed.

<sup>2)</sup> No performance determined.

