

# PRODUCT DATA SHEET

## SikaLevel®

Durable, cementitious, self-leveling underlayment

### DESCRIPTION

SikaLevel® is a one-component, durable and versatile cementitious underlayment for interior concrete, and cementitious substrates. It can be applied manually or by pump to produce a self-smoothing, rapid-setting, flat and economical substrate prior to the application of a final floor finish. Typical application thickness is 1/8 to 2 inches\* (3 to 50 mm).

\* in localized areas

### USES

Interior floor leveling and smoothing applications where floor coverings are to follow, such as:

**Institutional** - schools, colleges, hospitals, clinics, libraries, galleries, museums

**Commercial** - offices, corridors, hallways, canteens, cafeterias, stores, hotels, restaurants

**Residential** - domestic properties, condominiums and high rise construction

### CHARACTERISTICS / ADVANTAGES

- Easy and quick to install
- Zero VOC content and low odor
- Self-leveling
- Manual or pumpable application
- Levels new and renovates old floors
- Suitable for overcoating with non-moisture sensitive tile after 2–3 hours
- Floor coverings (carpet, vinyl, PVC, rubber, wood flooring) can be installed as soon as 1–3 days
- Excellent underlay for tiles, sheet products and wood floor bonding systems
- Is polymer modified and contains a rapid hardening cement

### PRODUCT INFORMATION

<b>Packaging</b>	50 lb. (22.7 kg) bag
<b>Appearance / Colour</b>	Concrete gray
<b>Shelf Life</b>	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging
<b>Storage Conditions</b>	<ul style="list-style-type: none"> <li>▪ Store dry at 41–86 °F (5–30 °C).</li> <li>▪ Condition material to 65–75 °F (18–24 °C) before using.</li> <li>▪ Protect from moisture. If damp, discard material.</li> </ul>

## TECHNICAL INFORMATION

<b>Compressive Strength</b>		<b>50 °F (10 °C)</b>	<b>73 °F (23 °C)</b>	<b>86 °F (30 °C)</b>	(ASTM C-109) Tested at: 73 °F (23 °C) 50 % R.H.
	<b>24 hours</b>	1,000 psi	1,250 psi	1,390 psi	
	<b>7 days</b>	1,625 psi	2,500 psi	2,600 psi	
	<b>28 days</b>	2,875 psi	3,750 psi	3,120 psi	
<b>Tensile Strength in Flexure</b>	1,150 psi (8 MPa) (28 days)				(ASTM C348) Tested at: 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	Pull-Out Strength 3/16" (5 mm) thickness with SikaLevel® Primer > 290 psi (2 MPa)				(ACI 503)

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	1 gallon (3.79 L) of water per 50 lb. (22.7 kg) bag	
<b>Fresh mortar density</b>	2.13 kg/m <sup>3</sup>	
<b>Consumption</b>	<b>Depth</b>	<b>Sq. Ft.</b>
	1/8" (3.2mm)	42 ft <sup>2</sup>
	1/4" (6.3mm)	21 ft <sup>2</sup>
	1/2" (12.5mm)	11 ft <sup>2</sup>
	1" (25mm)	5.3 ft <sup>2</sup>
	(Coverage figures do not include allowance for surface profile and porosity or material waste)	
<b>Layer Thickness</b>	<ul style="list-style-type: none"><li>1/8" up to 2" (3 up to 50 mm)</li><li>Can be extended with pre-washed 3/8" pea-gravel up to 2.5" (64 mm)</li></ul>	
<b>Ambient Air Temperature</b>	For application, between 41 °F (5 °C) and 86 °F (30 °C)	
<b>Substrate Temperature</b>	For application, between 41 °F (5 °C) and 86 °F (30 °C)	
<b>Maturing time</b>	Initial Set: 45–90 min. Final Set: 70–100 min.	(ASTM C-191) Tested at: 73 °F (23 °C) 50 % R.H.
<b>Pot Life</b>	Approx. 25 minutes	
<b>Waiting Time / Overcoating</b>	Ready for Covering: <ul style="list-style-type: none"><li>Tile/Stone/non-moisture sensitive flooring: 2–3 hours</li><li>PVC/ Carpet/Vinyl/Rubber flooring: 1 day</li><li>Hardwood/Engineered Wood flooring: 3 days</li></ul>	
<b>Applied Product Ready for Use</b>	2–3 hours for foot traffic	

## BASIS OF PRODUCT DATA

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.

## LIMITATIONS

- For interior use only. Not suitable for slopes or inclines > 0.5 %
- Do not apply SikaLevel® onto based, chipboard, particle board, hardboard, metal, gypsumbased floors or dimensionally unstable substrates.
- Always prime concrete and cement substrates with

Sika® Level Primer.

- Protect SikaLevel® from excessive heat and moving air by turning off radiant heating and forced air ventilation for 24 hours before installation and while the underlayment is curing.
- Do not exceed the recommended water dosage and use clean potable water.
- Temperature variations will affect working time, with low temperatures extending drying times.
- Protect newly applied SikaLevel® from condensation and water for at least 24 hours.
- Prevent contaminants, dust and dirt from coming into contact with the underlayment for at least 4 hours and do not expose to rolling dynamic loads for 2 days (at 73 °F, 50 % R. H.).

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- If subsequent layers of SikaLevel® are installed on existing, cured SikaLevel®, mechanical preparation and re-priming is required.
- As the thickness of the underlayment will influence the time at which it can be overcoated or overlaid with stones, tiles, or coverings, the manufacturer of such materials must be consulted for guidance regarding substrate moisture content and other characteristics.
- SikaLevel® does not provide an aesthetic finish and is intended to receive a final floor covering.
- For adhesives other than SikaBond®, we recommend a test application prior to use.

## 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.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

All substrate must be dry, stable, sound and free of all contaminants such as grease, oil, paint, wax, dust, curing and sealing compounds that will interfere with the penetration the primer and the adhesion of SikaLevel®.

Careful consideration should be given to the selection of the method of mechanical surface preparation and the timing of application of primer and underlayment. Immediately following mechanical preparation on some excessively porous substrates, outgassing will increase for a short period of time (approx. 48 hours) until equilibrium in slab vapor pressure and the ambient environment is reached. Consult Sika Technical Service for recommendations.

**Concrete & Cement Substrates:** Prepare concrete, cement and dense substrates, including ceramic, quarry and vinyl tiles by mechanical means, such as shot blasting, sandblasting, water-jetting, scarifying, or other appropriate methods, to achieve an open-textured, fine-gripping surface (ICRI - CSP 3 minimum). Weak surfaces should be removed. All cracks and holes should be similarly filled to prevent seepage. Repair with Sika® Level Skim Coat prior to priming and leveling. The compressive strength of the concrete substrate should be at least 2,900 psi (20 MPa) at 28 days with a minimum tensile strength of 200 psi (1.4 MPa).

**Cutback Adhesive:** Old water-soluble adhesives should be removed completely. Old water-resistant adhesives should be mechanically removed as far as possible. The complete mechanical removal of cutback (i.e. grinding, sanding and blasting) can be hazardous as old cutback adhesive may contain asbestos. Do not sand or grind adhesive residue. Harmful dust may result. Inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Please consult the adhesive manufacturer and all applicable government

agencies for rules and regulations concerning the removal of flooring and adhesives that contain asbestos.

### Priming

Prime standard absorbent substrates such as concrete and cement with SikaLevel® Primer.

This product is not a vapor barrier and will allow free passage of moisture. Follow the directions of the floor covering manufacturer regarding the maximum allowable substrate moisture content and test the substrate prior to installing SikaLevel®.

### MIXING

Pour 1 gallon (4 quarts) of cool potable water (70 °F) into a suitably sized and clean mixing container, using a calibrated measuring jug, or similar, to ensure strict control of the water content (do not over-watering). If available water is not at this temperature, then consideration should be given to cooling/heating the water. Add SikaLevel® to the water, while slowly stirring, adding the complete contents of the 50 lb. bags.

Mix with a high-speed drill (more than 650 rpm) and an egg beater style mixing paddle to blend water and powder for approximately 3 minutes, until a lump-free and uniform mix has been produced. Do not overmix or allow the paddle to rise above the level of material as this will introduce and entrap air into the mix, potentially shortening the working life or causing pin-holing in the underlayment. Let the mixed material stand until the majority of air bubbles have dispersed.

### APPLICATION

Pour the mix and spread using a smoothing trowel. Even surfaces are easily achieved using a pin leveler. In higher thickness using a spike roller is recommended. Avoid contact to vertical structures by putting in an edge strip such as foam tape.

If a second layer of leveling compound has to be applied, prime the first layer with Sika® Level Primer when the first layer is walkable. The maximum layer thickness must not be exceeded in case of two layer applications. The second layer must not exceed the layer thickness of the first layer.

Protect curing SikaLevel® layers from high ambient temperatures, direct sunlight and ensure an adequate air circulation.

The cured surface of SikaLevel® must be protected from any type of contamination by installing a suitable coating. Always install an adequate number of properly located test areas, to include the finish flooring, to determine the suitability of the product for its intended use. As floor coverings vary, always contact and rely upon the floor covering manufacturer for specific directions such as maximum allowable moisture content, adhesive selection, and intended end use of the product. Low substrate temperatures and/or high ambient humidity require longer drying times for primers. SikaLevel® is not intended to be used as a wear layer.

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All cement based products have the potential for cracking. Cracking, such as hair line cracking cannot be considered as a product defect or installation failure.

**For large scale areas that require deeper applications, the following recommendations can be used to minimize material cost:**

1. The material can be extended by adding up to 30 % of 20/30 grade sand during mixing to achieve up to 2" in one lift. A reduction in flow, approximately 15 %, can be expected. The final layer should be neat to allow for a smooth finished floor. When adding aggregate, expect coverage to increase by approximately .16 cu.ft. per 25 lbs of aggregate.

2. Pre-washed 3/8" pea-gravel can be pre-placed into the area being leveled allowing for up to 2" in one lift. Applicator must be aware that the aggregate can cause voids in the underlayment if not filled correctly. When adding aggregate, expect coverage to increase by approximately .16 cu.ft. per 25 lbs of aggregate. Multiple lifts can also be applied to achieve greater depths, making sure to prime with Sika® Level Primer in between lifts. If necessary, further detailed recommendations can be obtained by calling Sika Corporation's Technical Service Department. Over large areas, application by conventional piston, rotor-stator or underlayment type pumps is more appropriate. Thoroughly spike roll in two directions (90 °) to remove installation marks and any entrapped air, but avoid overworking.

#### **CLEANING OF TOOLS**

Clean tools in water immediately.

#### **Disposal**

Empty packaging and dispose of in accordance with federal, state and local waste disposal regulations.

## **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.

## **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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

#### **Sika Pakistan (Pvt.) Limited**

141-CCA Phase IV, DHA

Lahore Punjab 54792

Pakistan

phone: +92 42 3569 4266 - 67

fax: +92 42 3569 4268

<http://pak.sika.com/>

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