BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

SikaLevel®-250

SUPERIOR FLOW, CEMENTITIOUS, SELF-LEVELLING UNDERLAYMENT

PRODUCT DESCRIPTION

SikaLevel®-250 is a one-component, polymer-modified cementitious underlayment for interior concrete, engineer-approved plywood and a variety of existing substrates. Its high-flow, self-levelling properties allow it to be applied, either manually or by pump, to produce a flat and cost-effective substrate prior to the application of a final floor finish. Typical application thickness is 3–31 mm (1/8 in–1 1/4 in).

WHERE TO USE

- Concrete
- Approved plywood underlayments
- Unconventional substrates with SikaLevel®-02 EZ Primer CA (see product data sheet for more information)

CHARACTERISTICS / ADVANTAGES

- Hgh-flow fluidity and superior workability for easy installations-levelling
- Zero VOC content and low odour
- Can be mixed by hand using a drill or by using a mixing and pumping equipment (see Pump Mixing section)
- Levels new and renovates old floors
- Can be walked on after 3 hours at 23 °C
- Ceramic tiles and non-moisture sensitive natural stone and agglomerated stones can be installed after only 3 hours
- Carpet can be installed after only 16 hours. Vinyl and PVC flooring can be installed after 1 day. Rubber and engineered wood flooring can be installed after 3 days
- Suitable on floors with in-floor radiant heating

PRODUCT INFORMATION

Composition / Manufacturing	Cement-based, fillers and Sika's latest generation of polymers		
Packaging	22.7 kg (50 lb) bag		
Shelf Life	12 months in original, unopened bag.		
Storage Conditions	Stored (unopened) in its original packaging, in a dry place between 5 °C (41 °F) and 32 °C (90 °F). For best results, condition product between 18 °C (65°F) and 29 °C (84 °F) before using.		
Density	(wet mix) 2.1 kg/L (132 lb/ft³) ASTM C185		
CSC MasterFormat®	**03 54 16| HYDRAULIC CEMENT UNDERLAYMENT**		
Compressive Strength	24 hours	18.0 MPa (2610 psi)	(ASTM C109) modified 23 °C / 50 % r.h.
	7 days	21.6 MPa (3333 psi)	
	28 days	30.4 MPa (4010 psi)	

Tensile Strength in Flexure	7 days	7.1 MPa (1030 psi)	(ASTM C348)
Tensile Strength	> 2 MPa (290 psi) failure in the substrate		
Mixing Ratio	Betweem 4.75 L and 5 L (1.25 and 1.32 US gal) water per 22.7 kg (50 lb) bag		
Yield	~15.3 L (4 US gal) per 22.7 kg (50 lb) bag Approximate coverage at typical thicknesses per 22.7 kg (50 lb) bag: ▪ 6 mm (1/4 in) 2.4 m² (26 ft²) ▪ 12 mm (1/2 in) 1.2 m² (13 ft²) **Note:** Coverage figures do not include allowance for surface profile and porosity or material waste.		
Ambient Air Temperature	Between 5 °C (41 °F) and 35 °C (95 °F)		
Relative Air Humidity	< 75 % **Note:** The substrate and uncured product applied on the floor, must be at least 3 °C above dew point to reduce the risk of condensation, blooming or cement laitance forming on the surface.		
Substrate Temperature	Between 13 °C (55 °F) and 32 °C (90 °F)		
Waiting Time	Can be walked on after 3 hours **Floor covering installation:** ▪ Ceramic tile and moisture-insensitive stone: 3 hours ▪ All other floor coverings: Between 16 hours and 3 days depending on the type of floor covering. **Note:** The above data is provided as an indication, for a temperature of 23 °C (73 °F) and ambient relative humidity of 50 % when applied at 9 mm (3/8 in). Drying will be affected by the actual job site conditions (such as temperature and relative humidity in particular). Prior to the installation of the SikaLevel®-250 system, the moisture level in the concrete slab must be measured following the written instructions and meet the requirements of the manufacturer of the floor covering to be installed.		
Flowability	SikaLevel®-250 provides up to 20 minutes of working time.		

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.
Properties tested at 23 °C (73 °F) / 50 % r.h. unless stated otherwise.

LIMITATIONS

- **Important:** protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product between 18 °C (65°F) and 29 °C (84 °F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer curing times.
- SikaLevel®-250 is designed for interior use only and should not be used in areas subjected to prolonged exposure to moisture.
- SikaLevel®-250 is not intended to be used as a wear layer even if coated or sealed, it must be protected by installing a suitable floor covering.
- Do not install SikaLevel®-250 onto existing glue down or self-stick vinyl tiles or vinyl planks.
- Do not install SikaLevel®-250 over chipboard, particleboard, Oriented Strand Board (OSB), hardboard, lauan, wood floors (such as but not limited to solid wood, engineered wood, etc.), crack isolation or sound reduction membrane, gypsum-based patching or over any dimensionally unstable substrates.
- Do not install over moving control joints (with active

cracks) or over expansion joints.
- Always prime concrete and engineer approved plywood underlayements with Sika® Level-03 Primer Plus. Sika® Level-02 EZ Primer (CA) should be used over properly prepared epoxy, ceramic tiles, old vinyl sheet flooring and old substrates with water-resistant adhesive residues. Refer to primer product data sheet for important information on preparation and product use and limitations.
- Protect SikaLevel®-250 from excessive heat and moving air by turning off radiant heating and forced air ventilation for 24 hours before installation and whilst the underlayment is curing.
- Do not exceed the recommended water dosage.
- Do not expose to accelerated drying conditions during the first three hours. Examples of such conditions are; high temperatures and sunlight, rapid air circulation (which can be observed near doors or where air diffusers vents are not yet installed at the time of pouring. the self-leveller.
- Avoid walking on the SikaLevel®-250 underlayment for at least three (3) hours and do not expose to rolling dynamic loads for three (3) days, at 23 °C / 50 % r.h.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

SUBSTRATE QUALITY

Substrate to have adequate strength, load-bearing capacity, be dimensionally stable and be permanently dry.

SURFACE PREPARATION

All substrates must free of dust, dirt, oil, grease, cement laitance, efflorescence or any contaminants or conditions that may affect adhesion or overall product performances. Surface treatments or any friable areas of the substrate must be mechanically removed and the surface be repaired with one of Sika's patching compounds or self-levelling material as required. All cracks and holes should be similarly filled to prevent seepage during the application of SikaLevel®-250. 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 concrete substrates, outgassing will increase for a short period of time (approx. 48 hours) until equilibrium in slab vapour pressure and the ambient environment is reached. Layers of water soluble adhesives are to be completely removed by mechanical means. Where installing SikaLevel®-250 over wooden substrates. The underlayment must be a Group 1 exterior grade plywood, Select (SEL) or Select Tight Face (SEL TF) CANPLY conforming to CSA-0121 standard for Douglas Fir (DFP) for direct bond applications. The wooden floor shall meet, as a minimum, the deflection parameters of L/360 (live and dead loads such as kitchen islands taken into consideration). Refer to the manufacturer of the final floor covering with regard to the deflection requirements of the floor finish system since more severe deflection criteria may apply to large format tiles or otherwise to stone products.

PRIMING

Prime standard absorbent substrates such as concrete and cement diluting 1 part of Sika® Level- 03 Primer Plus with 3 parts of clean potable water (check that the concrete absorbs water well by means of a water drop test). Prime engineered approved plywood underlayment with undiluted Sika® Level- 03 Primer Plus.

Prime non-absorbent, smooth, sound substrates such as ceramic tiles and old water-resistant adhesive residues (removed as much as possible) with Sika® Level-02 EZ Primer (CA). Refer to primer product data sheet for important information on preparation and product use and limitations.

Note: Read and understand the respective PDS for complete and detailed instructions on the usage of each primer.

MIXING

Use between 4.75 L and 5 L of potable water [~ 21°C (~ 70 °F)] for each 22,7 kg bag of SikaLevel®-250.

Manual mixing

Pour the appropriate amount of water 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 add more water). Add SikaLevel®-250 to the water, while slowly mixing, adding the complete contents of the bag. If available water is not at this temperature, then consideration should be given to cooling/heating the water. Mix with a high-speed drill (> 650 rpm) and an egg beater style mixing paddle to blend water and powder for approximately three (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 at the surface of SikaLevel®-250.

Pump mixing

Pump mixing can save time over manual mixing. Best industry practice will ensure proper performance of any self-levelling material and Sika wishes to share some important ones with you:

- SikaLevel®-250 can be mechanically mixed with a

continuous mixer and pump using a minimum of 40 m (130 ft) of hose or with a batch mixer and pump using a minimum of 25 m (80 ft) of hose. Some mixing occurs as the material travels through the hose but minimum length is critical to ensure proper consistency and lump-free material is delivered. Furthermore, when using a batch mixer, do not cut short on the mixing time (to ensure a homogeneous mix, prevent segregation, etc.).
- Consideration should be given about how the hose is held at delivery (above the shoulder). This will help provide some back pressure in the hose which can generally improve the consistency at delivery.
- Verify flow periodically (at least for each skid of self-levelling material).
- Ensure that water pressure/output to the mixing equipment is fairly consistent. Variation of water pressure at source will impact on the consistency of SikaLevel®-250.
- Do not exceed water ratio. The consistency and flow time will seem better but this will invite segregation which results in increase shrinkage (crack development) and weak/soft surface.

APPLICATION

Pour the mix and spread using a smoothing trowel. Even surfaces are easily achieved using a pin leveller. It's not recommended to remove trowelling defects or to level more than once. SikaLevel®-250 has an approximate self-healing (working) time of up to 20 minutes at 23 °C (73 °F). SikaLevel®-250 can be applied from 3 mm to 30 mm (1/8 in to 1 1/4 in) in a single application. Apply enough SikaLevel®-250 to sufficiently cover all high spots. Smooth the surface with a smoother tool to obtain an even surface. Consider the width of the pour so as to maintaining a wet edge throughout placement. If a second layer of levelling compound has to be applied, prime the first layer with Sika® Level-03 Primer Plus (1:1) when the first layer is walkable. The second layer must not exceed the layer thickness of the first layer. Protect curing SikaLevel®-250 from high ambient temperatures, direct sunlight and drafts.

Note: Jobsite trials (while considering possibly also including the floor covering) are recommended to establish suitability of application equipment and technique, acceptable workmanship, consumption and coverage rates and the performance of the floor system as a whole.

PROTECTING NEWLY COMPLETED POURED FLOOR

On completion of installation of sv(name). It is the responsibility of the owner/agent or general contractor to protect the floor from dust and dirt until such time that the flooring installation is completed.

CURING TREATMENT

SikaLevel®-250 must be allowed to air cure. Do not wet cure or use curing and sealing compounds.

CLEAN UP

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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