FLOORING
Sikafloor® Level UNDERLAYMENT

SELF LEVELING CEMENTITIOUS FLOORING

BUILDING TRUST

RELIABLE UNDERLAYMENTS MAKE A DIFFERENCE

The quality of an underlayment can make all the difference between a smooth flooring system application and a troublesome one, a positive flooring experience and disappointment.
Sikafloor® Level cementitious products meet or exceed all the latest standards and requirements for both new and refurbishment work. They provide customers with peace of mind for a high quality and reliable underlayment under most hard – and soft – surface floor coverings.

Sikafloor® Level
LEVELING SOLUTIONS

A PERFECTLY EVEN AND SMOOTH FLOOR SUBSTRATE surface plays an important role in the final result and service life of the floor, no matter what kind of floor covering will be installed over it. Sika supplies self-leveling cementitious underlayments whose outstanding performance has been proven in construction projects in residential and non-industrial environments.

The existing floor is out of level and not flat. Or you need to install underfloor heating. Or you need only a thin floor leveling over the screed. Before covering your floor with the final flooring material, a strong, smooth floor surface has to be prepared. There are various ways to do it, for which Sika provides high quality and easy-application leveling materials.

WHY IS SELF-LEVELING AN ADVANTAGE?

Self-leveling cementitious compounds can quickly even out large floor surfaces and require minimal effort. After the product is mixed with water according to the product data sheet, it is poured over the uneven substrate of the floor. Self-leveling compounds have a thinner consistency than other types of cement screeds, and they easily fill uneven areas.

WHY SHOULD YOU CHOOSE SIKA UNDERLAYMENT?

- Solid know-how and consistent high product quality
- Versatile: suitable for all kinds of flooring substrates
- Very easy mixing and application
- High surface coverage performance due to smooth application
- Outstanding flow properties
- Flat surfaces can be easily achieved, even in thin layers
- Low tension/stress/shrinkage when curing
- Drying by hydration, rapid hardening
- Optimized absorptivity
- High level of hardness and strength

SIKA UNDERLAYMENT PRODUCTS

LEVELING PRODUCTS:

- Sikafloor®-100 Level
- Sikafloor®-200 Level
- Sikafloor®-300 Level
- Sikafloor®-300 Rapid Level
- Sikafloor®-400 Level

PATCH:

- Sikafloor®-040 Patch

PRIMERS:

- Sikafloor®-01 Primer
- Sikafloor®-02 Primer
- Sikafloor®-03 Primer

Sikafloor® PRIMERS FOR UNDERLAYMENTS

WHY Sikafloor® PRIMERS?

Sikafloor® Primers can be used on a wide range of substrates before the application of Sikafloor® self-leveling cementitious underlayment products. These primers can reduce the absorbency of the substrates and improve the adhesion between the underlayment and the substrate. In some cases they are also used as a protection for the substrate against the moisture coming from the self-leveling cementitious underlayments.

All our Sikafloor® Primers are rated as low-emission and meet GEV-Emicode EC-1 plus.

Sikafloor ® PRIMERS APPLICATION AREAS:

Use		Primer		
		Sikafloor®-01 Primer	Sikafloor®-02 Primer	Sikafloor®-03 Primer
		Interior	Interior	Interior/Exterior
Substrates	Concrete	Diluted 1:3		
	Cement screeds	Diluted 1:3		
	Rapid cement renders	Diluted 1:3		
	Calcium Sulphate	Diluted 1:1		
	Mastic asphalt screed (IC10, IC15)			
	Magnesia			
	Tiles			
	Old water resistant adhesive residu			
	Natural stone / terrazzo			
	Wood chipboard / OSB			

Please refer to the datasheets of the primers for the application information and instructions.

1st choice
2nd choice

Sikafloor® PRIMERS

Sikafloor®-01 Primer	CHARACTERISTICS & ADVANTAGES	
	Reducing absorbency	Can be applied to almost all substrates
	Improving adhesion on smooth and sound substrates	Can be sprayed
	Substrate protection against moisture from leveling compounds	Easy to apply
	For interior use	Can be diluted with water
	Low consumption / high coverage	Grip promoting
	Suitable for application on subfloor heating systems	EC1plus certified
	Short waiting time	**Color:** blue
PACKAGING	5 kg and 10 kg plastic can, box with 12 bottles 1 kg	

Sikafloor®-02 Primer	CHARACTERISTICS & ADVANTAGES	
	One component	Easy to apply by roller
	Provides optimum adhesion on tight substrates	Ready to use
	Good skid resisting properties	**Color:** turquoise
	Low consumption / high coverage	
	Suitable for application on subfloor heating systems	
	Short waiting time	
	Low odour	
PACKAGING	5 kg and 12 kg plastic pail	

Sikafloor®-03 Primer	CHARACTERISTICS & ADVANTAGES	
	Ready for use	Can be sprayed
	Good substrate penetration	Grip promoting
	Resistant to saponification	**Color:** magenta
	Short waiting time	
	Quick drying time	
	Suitable for application on subfloor heating systems	
	Easy to apply	
PACKAGING	10 kg plastic can	

Sikafloor® LEVELING COMPOUNDS

Sikafloor® LEVELING COMPOUNDS' APPLICATION AREAS AND CHARACTERISTICS ARE:

Use		Leveling compound		
		Sikafloor®-040 Patch	Sikafloor®-100 Level	Sikafloor®-200 Level
		Interior	Interior	Interior/Exterior
Substrates*	Concrete	■	■	■
	Cement screeds	■	■	■
	Rapid cement renders	■	■	■
	Calcium sulphate	■	■	■
	Mastic asphalt screed (IC10, IC15)			■
	Magnesia			■
	Tiles	■		■
	Natural stone / terrazzo			■
	Wood chipboard / OSB			
Characteristics*	Layer thickness plain	1 – 10 mm	2 – 10 mm	3 – 40 mm
	Layerthickness bulked	Up to 30 mm	–	Up to 60 mm
	Mechanical	C16 - F4	C25 – F6	C25 – F6
	Walkable	~ 45 min.	~ 3 hours	~ 4 hours
	Covering after (5 mm layer thickness)	~24 hours (tiles and levels ~ 2 hours with 30 mm patch thickness)	~ 48 hours	~ 24 hours

* Please refer to the datasheets of the underlayment's for the application information and instructions.

Coverings for residential & non-industrial		Leveling compound	
		Sikafloor®-100 Level	Sikafloor®-200 Level
Tiles		■	■
Textile		■	■
Elastic	Vinyl/lino	■	■
Wood	Parquet		■
Coatings			**

** Seamless resinous flooring covering we strongly recommend to use resinsystems with a minimum thickness of 2 mm. To assure proper preparation and a continious pore free surface please refer to the datasheets of the levels.

GEV-EMICODE EC 1 Very low emission

■ Appropriate

PRODUCTS

Sikafloor®-040 Patch

CHARACTERISTICS & ADVANTAGES

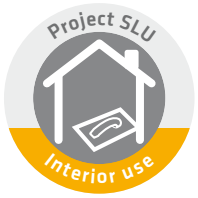
- Easy to mix
- Very sturdy, good application
- For interior and exterior use
- Quick drying time, independent of the layer thickness
- Suitable for application on subfloor heating systems
- Layer-thickness 1 – 10 mm without aggregates
- Layer-thickness up to 30 mm with aggregates
- Low tension/stress
- EN 13813, CT-C16-F4
- EC1plus certified

PACKAGING: 25 kg bag

Sikafloor®-100 Level

CHARACTERISTICS & ADVANTAGES

- For interior use
- Water proof against dispersion adhesives
- Smooth application, self leveling
- Suitable for application on subfloor heating systems
- Pumpable
- Suitable for castor wheels loading with layer thickness more than 2 mm according to EN 12529
- EN 13813, CT-C25-F6
- EC1plus certified



PACKAGING: 25 kg bag

Sikafloor®-200 Level

CHARACTERISTICS & ADVANTAGES

- Smooth application, self leveling
- Suitable for application on subfloor heating systems
- Layer thickness up to 60 mm with aggregates
- Low tension
- Pumpable
- Exterior use when covered
- Suitable for castor wheels loading according to EN 12529
- EN 13813, CT-C25-F6
- EC1plus certified

PACKAGING: 25 kg bag

Sikafloor® LEVELING COMPOUNDS

Sikafloor® LEVELING COMPOUNDS' APPLICATION AREAS AND CHARACTERISTICS ARE:

Use		Leveling compound		
		Sikafloor®-300 Level	Sikafloor®-300 Rapid	Sikafloor®-400 Level
		Interior	Interior	Interior
Substrates	Concrete			
	Cement screeds			
	Rapid cement renders			
	Calcium sulphate			
	Mastic asphalt screed (IC10, IC15)			
	Magnesia			
	Tiles			
	Natural stone / terrazzo			
	Wood chipboard / OSB			
Characteristics*	Layer thickness plain	1 – 10 mm	1 – 10 mm	1 – 10 mm
	Layerthickness bulked	Up to 20 mm	Up to 25 mm	Up to 25 mm
	Mechanical	C30 – F7	C50 – F10	C35 – F7
	Walkable	~ 2 hours	~ 1.5 hours	~ 2 hours
	Covering after	~ 24 hours**	~ 1.5 hours***	~ 24 hours**

* Please refer to the datasheets of the underlayment's for the application information and instructions.
** 5 mm layer thickness
*** Only for textile, vinyl and linoleum coverings

Coverings for residential & non-industrial		Leveling compound		
		Sikafloor®-300 Level	Sikafloor®-300 Rapid	Sikafloor®-400 Level
Tiles				
Textile				
Elastic	Vinyl/lino			
Wood	Parquet			
Coatings		**	**	**

GEV-EMICODE EC 1 very low emission

Appropriate

** Seamless resinous flooring covering we strongly recommend to use resinsystems with a minimum thickness of 2 mm. To assure proper preparation and a continious pore free surface please refer to the datasheets of the levels.

PRODUCTS

Sikafloor®-300 Level CHARACTERISTICS & ADVANTAGES

- For interior use
- Very smooth application, self leveling
- Suitable for application on subfloor heating systems
- Layer thickness up to 20 mm with aggregates
- Suitable for castor wheels loading with layerthickness more than 1 mm according to EN 12529
- Pumpable
- Good grindability
- Drying by hydration
- High leveling capacity of surface irregularities
- Low tension
- EN 13813, CT-C30-F7
- EC1plus certified

PACKAGING: 25 kg bag

Sikafloor®-300 Rapid Level CHARACTERISTICS & ADVANTAGES

- For interior use
- Smooth application, self leveling
- Suitable for application on subfloor heating systems
- Layer thickness up to 25 mm with aggregates
- Suitable for castor wheels loading with layer thickness more than 1 mm according to EN 12529
- Pumpable
- High level of hardness and strength
- For forklift truck traffic, layer thickness at least 3 mm
- EN 13813, CT-C50-F10
- EC1plus certified

PACKAGING: 25 kg bag

Sikafloor®-400 Level CHARACTERISTICS & ADVANTAGES

- Dust reduced
- For interior use
- High level of hardness and strength
- Very smooth application, self leveling
- Suitable for application on subfloor heating systems
- Layer thickness up to 25 mm with aggregates
- Pumpable
- Low tension
- Suitable for castor wheels loading with layer more than 1 mm according to EN 12529
- EN 13813, CT-C35-F7
- EC1plus certified

PACKAGING: 25 kg bag

SUBSTRATES FOR LEVELING

The precondition for a successful underlayment installation

THE SUBSTRATE SURFACE NEEDS TO BE INVESTIGATED for a later successful underlayment application. Thorough inspection and assessment are essential to determine if the surface's condition will ensure a durable bond to be achieved between the leveling compound and the substrate.

MAKE SURE THE SUBSTRATE IS STRONG AND STABLE ENOUGH

Keep in mind: a levelled floor can never be stronger than its substrate. The substrate surface solidity should be at least 1.0 MPa. If you are unsure about the quality of the surface, carry out a tensile test (glue a steel dolly to the surface and then pull it off using a tensile tester). The dimensional stability must be secured and must have permanent dryness in its lifetime.

Remove any weak areas on the substrate by sanding, scraping, grinding, milling, blasting or brushing, for example. Friable areas of the substrate must be mechanically removed and the substrate has to be repaired with a sturdy leveling compound, Sikafloor®-040 Patch, as required. Also old, loose and weak underlayments should be removed mechanically.

TREAT THE CRACKS AND JOINTS PROPERLY

Surface defects such as cracks must be patched well before or during priming as there is the risk of the screed material flowing into them and producing air bubbles or reflective cracks in the surface in case of substrate movement. Any expansion joints (or joints where movement is to be expected) must be respected and reflected on the surface of the underlayment.

In case of floor refurbishment especially of old floors proper prepared preparation is needed.

CHECK THESE CONDITIONS BEFORE INSTALLING UNDERLAYMENTS

With subsequent installation of floor coverings, cement screeds are required to display a residual moisture reading of ≤ 2.0 CM-% (heating screeds ≤ 1.8 CM-%); calcium sulfate screeds should have a reading of ≤ 0.5 CM-% (heating screeds ≤ 0.3 CM-%).

TREATMENT FOR SUBSTRATES WITH ADHESIVES ON THEM
Layers of water-soluble adhesives, e.g. sulphite-waste-adhesives, are to be mechanically removed. Remaining adhesive residues should be primed with Sikafloor ®-155WN/-156-/ -160/-161 epoxy primer. This epoxy primer should be fully broadcasted with quartz sand. If this primer is not broadcasted, the Sikafloor®-02 Primer should be used prior to the self-leveling compound.

Layers of water-resistant adhesives are to be mechanically removed as thoroughly as possible and remaining residues should be primed with Sikafloor®-02 Primer.

TREATMENT FOR SUBSTRATES SUCH AS CERAMIC TILES AND WOODEN FLOORS
Substrates such as ceramic tiles and wooden floors are to be thoroughly cleaned and sanded. Use dry cleaning methods (vacuum cleaning, dry mopping). Avoid using powerful cleaning agents that may be absorbed by the substrate; this could subsequently have a negative effect on adhesion.

EXAMPLES OF DIFFERENT SUBSTRATES


Concrete slab.


Primed tile floor.


Floor substrate covered with adhesive.

Sikafloor® Level APPLICATION

PREPARATION
Measure the total area to be levelled in m^2. Determine the thickness necessary to achieve desired level and performance requirements. Calculate the amount of material necessary.
Attention: the coverage indicated in the PDS excludes waste and practical considerations such as surface roughness.

Verify the availability of water supply (distance and available amount), whether it is for manual or pump application. The water must be clear and with the quality of potable water. It is prohibited to use contaminated or waste water! Verify the availability and distance of electrical power to drive the hand-held mixer or the pumping equipment.

Keep material in original, unopened and undamaged, sealed packaging, in dry conditions and at temperatures between +5°C and +30°C. Verify the accessibility to the site for delivery of the materials.

Wear proper safety equipment during application, referring to the safety data sheets of the products. When kneeling, use protective knee-pads. Ensure sufficient ventilation during the application.

PRIMING THE SURFACE
Apply Sikafloor® Primer with a suitable tool, e.g. a short-pile roller evenly on the substrate. Avoid applying an overdose that leads to puddles. Sikafloor®-01 Primer and Sikafloor®-03 Primer can also be spray-applied.

MIXING
Manual: The amount of water to be added varies from product to product. Please refer to the relevant PDS. Prepare the necessary amount of water, add it to a container, and start to stir the water with the electric mixer. Then add the powder to the water while stirring the water. The use of a mixer with a disc stirring rod is recommended. Mix for about 2 minutes and after a short maturing time, mix again thoroughly. Never add water to the powder or add it in stages, as this alters the properties of the product.

Automatic: Use a conventional floor screed continuous or dual stage mixer and pump. Periodically control the water dosage to achieve the required flow. Measure the final average flow diameter by using the Flow-ring set according to EN 12706 or ASTM C 230-90. Flow-Ring-Set in order to achieve the same flow as indicated in the PDS. See photos below.

APPLICATION CONDITIONS
The Sikafloor® Primer and Sikafloor® Level can be applied at substrate and ambient temperatures between +5°C min. and +30°C max. Please refer to the relevant PDS for exact temperature conditions.

Do not install the Sikafloor® Level in a draught and switch off all ventilation devices during and after the application for 24 hours. Protect the fresh surface from sunshine and direct sources of heat.

At high ambient and substrate temperatures, the setting speed increases and reduces the working time or time available to finish the surface. At low ambient and surface temperatures, the setting speed and working time decreases. At high relative humidity, the mixing water is not lost to evaporation, reducing the risk of shrinkage cracks. At low relative humidity, the risk of water loss through evaporation will increase and consequently the risk of shrinkage cracks is significantly increased.

APPLICATION
After mixing pour out the self-leveling compound onto the primed surface and spread using a notched trowel or adjustable pin-leveler (pinrake) to the required thickness.

Keep a continuous supply of mixed material and place it efficiently to allow maintaining a "wet edge" which will reduce the differences between batches where the material already starting to dry and set. Surface styling is affected by the choice of finishing tool.

The use of a spike roller isn't mandatory for every self-leveling compound, please refer to relevant PDS, but can be recommended to remove troweling defects.

Do not delay starting this process of spike rolling for too long (no more than ~5 minutes after placing), particularly at higher temperatures, because of the risk of leaving roller marks or causing unevenness on the mortar surface or "waves". Do not roll the application excessively (for too long), as this may cause an unsightly appearance.

Depending on the thickness of the applied layer and the method of placing, the working bay should be determined. Pot life/workability is limited to ~20 – 30 minutes at 23°C. Lower temperatures make the workability slightly longer. For pot life for each product please refer to relevant PDS.

The product is placed by walking along the front and keeping a "wet edge", that is, always placing material onto previously placed material before it starts to set, dry (turn matt) and harden. The width of the front will be determined by the application conditions. The higher the substrate and ambient temperature, the narrower the front.

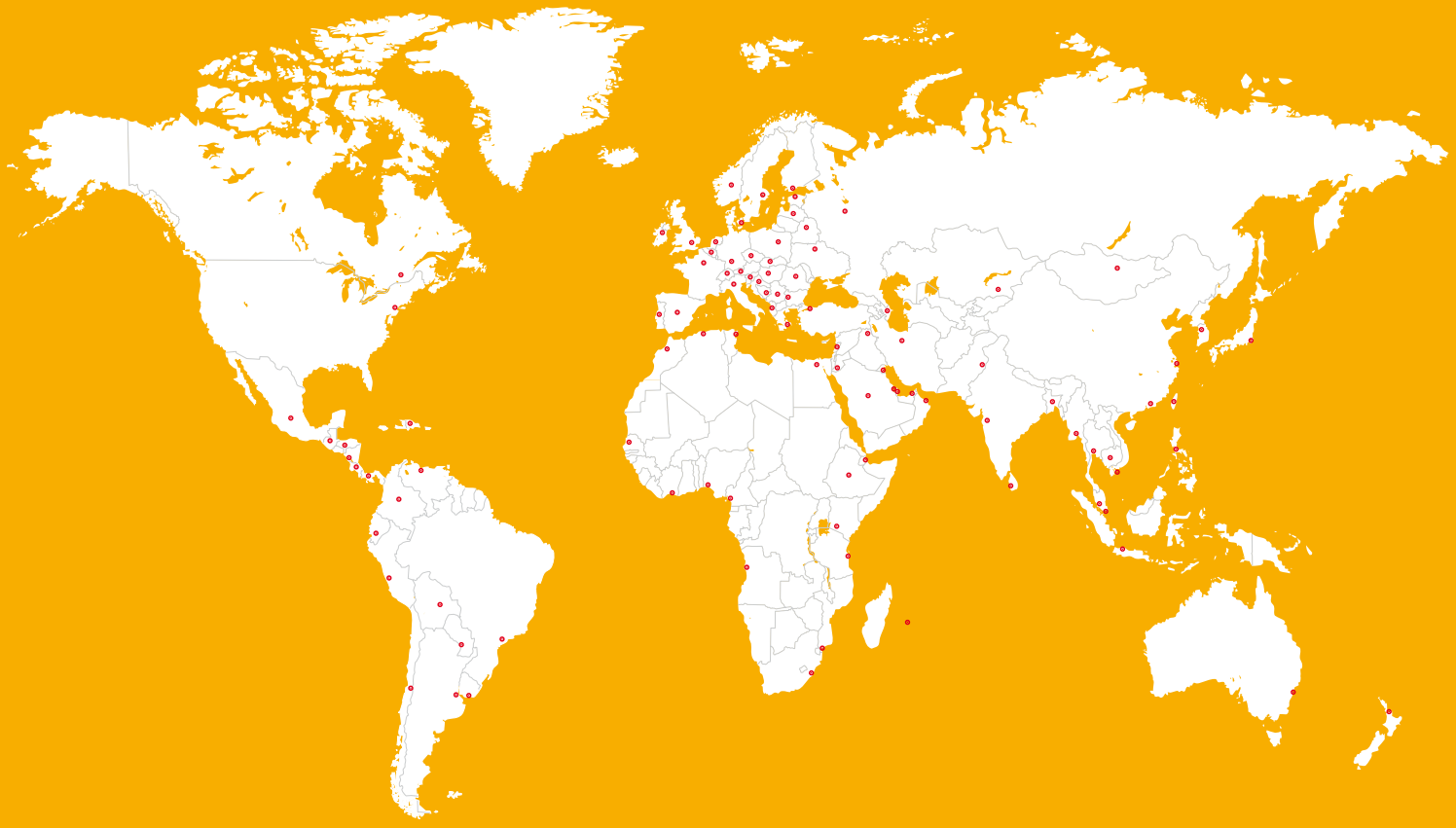

1


2


3

1 Application with notched trowel.
2 Application with adjustable pin-leveler.
3 The product is placed by walking along the front and keeping a "wet edge".

GLOBAL BUT LOCAL PARTNERSHIP



FOR MORE SIKA FLOORING INFORMATION:

WE ARE SIKA
Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

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