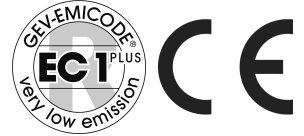


PRODUCT DATA SHEET

Sikafloor®-400 Level

Dust reduced polymer modified cementitious floor levelling compound.
1–10 mm



DESCRIPTION

Sikafloor®-400 Level is a dust reduced, very low emission, polymer modified cementitious floor levelling compound. It provides a reduced shrinkage and smooth finish compound on subfloors before the application of floor coverings.

USES

Formulated for smoothing and levelling interior residential and non-industrial subfloors before applying:

- Wood flooring
- Parquet flooring
- Ceramic tiles
- Stone tiles
- Seamless resin floors
- Textile floor coverings
- Resilient floor coverings (linoleum, vinyl)

CHARACTERISTICS / ADVANTAGES

- Dust reduced
- Self-levelling
- High level of hardness and strength
- Smooth finish
- Suitable for application on subfloor heating systems
- Layer thickness: 1 – 10 mm. Up to 25 mm with aggregate
- Drying by hydration process
- Pumpable
- Very low tension / stress on substrate
- Low shrinkage
- Extendable without loss of strength for higher layer thickness
- Suitable for castor wheels in accordance with EN 12529

SUSTAINABILITY

VOC emission classification GEV-Emicode EC1^{PLUS}

APPROVALS / CERTIFICATES

CE Marking and Declaration of Performance to EN 13813 - Screed material and floor screeds. Class CT-C35-F7

PRODUCT INFORMATION

Composition	Cement based, polymer modified
Packaging	25 kg bag Refer to current price list for packaging variations
Appearance / Colour	Powder / Grey
Shelf life	6 months from the date of production.
Storage conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Always

refer to packaging.

Product declaration EN 13813: Class CT-C35-F7

TECHNICAL INFORMATION

Compressive strength	Time	Temperature	Value	(EN 13892-2)
	28 days	+23 °C	≥ 35 N/mm ²	
Tensile strength in flexure	Time	Temperature	Value	(EN 13892-2)
	28 days	+23 °C	≥ 7 N/mm ²	
Reaction to fire	A2 _{fl} - S1			

APPLICATION INFORMATION

Mixing ratio	Sikafloor®-400 Level: ~6,3–6,5 L of water for 25 kg of powder. Sikafloor®-400 Level with aggregate: 16 kg or 10 L of quartz sand (0,1–3,0 mm) for 25 kg of powder (~65 % by weight). ≤ 6,5 L water for 25 kg of powder.		
Consumption	~1,5 kg/m ² /mm This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.		
Layer thickness	General		
	Product	Thickness range	
	Sikafloor®-400 Level	1–10 mm	
	Sikafloor®-400 Level with aggregates	10–25 mm	
	Special conditions		
	Condition	Minimum thickness	
Castor wheel loadings	More than 1 mm according to EN 12 529		
Parquet / wooden plank covering	2,0 mm		
Resin floor covering	4,0 mm		
Ambient air temperature	+5 °C min. / +30 °C max.		
Relative air humidity	< 75 %		
Substrate temperature	+5 °C min. / +30 °C max.		
Substrate pre-treatment	Important: ⁽¹⁾ If the layer thickness of Sikafloor®-400 Level exceeds 10 mm prime the calcium sulphate substrate twice with Sikafloor®-155 WN and broadcast with quartz sand (0,2–0,8 mm). If Sikafloor®-155 WN is not fully broadcast, use Sikafloor®-02 Primer before applying Sikafloor®-400 Level. Note: (1:3 or 1:1) denotes primer dilution with water. Primer : Water		
	Substrate	Primer	
	Normal absorbent substrates: concrete, cement screeds, rapid cement screeds	Sikafloor®-01 Primer (1:3) or Sikafloor®-03 Primer	
	Calcium sulphate substrates ⁽¹⁾	Sikafloor®-03 Primer or Sikafloor®-01 Primer (1:1)	
	Non-absorbent substrates: ceramic tiles, water-resistant adhesive residues, epoxy resin layers and mastic asphalt screeds not fully broadcast	Sikafloor®-02 Primer or Sikafloor®-01 Primer	
	Wood based substrates: chipboard, OSB, parquet, wooden planks	Sikafloor®-03 Primer or Sikafloor®-01 Primer	
Magnesia screeds (not xylolite)	Sikafloor®-02 Primer		
Pot Life	~30 minutes at +20 °C		

Waiting time to overcoating

Important: Before applying floor covering, make sure the Sikafloor®-400 Level has achieved the required moisture content value required by the covering manufacturer. (Refer to the covering Product Data Sheet).

Note: Times are approximate and measured at +20 °C (ambient) / +15 °C (substrate) / 65 % r.h.

Note: Application times will be affected by changing substrate and ambient conditions, layer thickness and water content.

Sikafloor®-400 Level can be covered as follows:

Floor covering	Layer Thickness	Waiting Time
Wood, ceramic tiles, textile, resilient	≤ 5 mm	~24 hours
Wood, ceramic tiles, textile, resilient	≤ 10 mm	~48 hours
Wood, ceramic tiles, textile, resilient	≤ 15 mm	~3 days
Wood, ceramic tiles, textile, resilient	≤ 25 mm	~5 days
ceramic tiles	≤ 25 mm	~3–5 hours

Applied product ready for use

Note: Time will be affected by changing substrate and ambient conditions, layer thickness and water content

Foot traffic: ~3 hours

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.

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.

IMPORTANT CONSIDERATIONS

- Old mastic asphalt screeds IC10 and IC15 (EN 18813), often contain cracks or are embrittled. This substrate will not generally have sufficient tensile strength for taking a low-stress cementitious levelling compound. Consider using a stress-free gypsum-levelling compound.
- Do not apply on substrates with rising moisture. If rising moisture can occur, an effective damp proof membrane must be applied in compliance with the relevant national standard.
- Wooden substrates covered with Sikafloor®-400 Level used in combination with a final finish of ceramic tiles, must be designed as an unbonded system by using a membrane or insulation layer. For more information consult Sika Technical Services.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Suitable Substrates

- Concrete
- Cementitious screeds
- Rapid cement screeds
- Calcium sulphate screeds
- OSB boards
- Parquet flooring
- Wooden planks
- Chipboard
- Mastic asphalt screeds (IC 10 and IC15) (EN 13813) thickness 1–3 mm
- Magnesia screeds
- Ceramic tiles
- Natural stones

Substrate quality

- Cementitious substrates (concrete / screed) must be sound. Repair or relay broken / loose ceramic tiles or

stones and securely fix wood substrates to the sub-floor.

- Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, polish, coatings, water-soluble and water-resistant adhesives, varnish, laitance, surface treatments and loose friable material.
- Remove weak cementitious or mastic asphalt substrates and levelling layers.
- Remove separation and sinter layers.

Pre-treatment

- Prepare cementitious, mastic asphalt, ceramic tile and natural stone substrates mechanically by selecting and using abrasive blast cleaning, grinding, planing, scarifying or abrading (sanding) equipment suitable for the type of substrate.
- The final texture of the substrate must be open textured and gripping.
- Surface defects such as blow holes and voids must be fully exposed using the surface preparation equipment.
- Use products from the Sikafloor®, Sikadur® and Sikagard® range of materials to level the surface or fill cracks, blow holes and voids. Contact Sika Technical Services for additional information on products for levelling and repairing defects.
- Products must be cured before applying Sikafloor®-400 Level.
- Repair or relay tiles or stones.
- Existing mastic asphalt screeds must be open textured and gripping after preparation or have a rough sand broadcast surface. If the surface is smooth (insufficiently broadcast / worn surface). Prime substrate with primer Sikafloor®-02 Primer or Sikafloor®-01 Primer undiluted before applying Sikafloor®-400 Level. Applicable for interior areas only.
- Wood substrates must be mechanically abraded using sanding equipment to achieve a rough textured gripping surface profile.
- Securely fix loose planks or boards to sub-floor. Fill joints, cracks or holes with wood filler to prevent leakage of the applied Sikafloor®-400 Level. Wood filler products must be fully hardened before applying Sikafloor®-400 Level.
- Seal remaining water-soluble adhesive residue by priming floor with Sikafloor®-155WN/-150/-151/-156/-160/-161 or Sika® Primer MB Rapid and fully broadcast with kiln dried quartz sand. If quartz sand is not used, the sealing primer must be coated with Sikafloor®-02 Primer before applying Sikafloor®-400 Level.
- Use industrial vacuuming equipment to remove all dust, loose and friable material from the application surface before applying the product.
- To improve the adhesion and provide a pore free surface for subsequent coverings, use Sikafloor®-01

Primer, Sikafloor®-02 Primer or Sikafloor®-03 Primer.

EQUIPMENT

Select the most appropriate equipment required for the project:

Substrate preparation equipment

- Abrasive blasting cleaning equipment
- Grinding equipment
- Planing machine
- Scarifying machine
- Abrading (sanding) equipment
- Industrial vacuuming equipment

For other types of preparation equipment, contact Sika Technical Services

Mixing equipment

- Electric single or double paddle mixer (<600 rpm) with helical disc-shaped mixing paddle
- Scraper
- Clean mixing containers

For other types of mixing equipment, contact Sika Technical Services

Application equipment

- Mixed material carrier
- Pin-leveller (Pin-rake)
- Surface blade
- Screed rake
- Notched trowel
- Smoothing trowels
- Spike roller

For types of pumping equipment, contact Sika Technical Services

MIXING

Important: Do not add more than 6,5 L of water to 25 kg of powder.

Important: Do not mix or blend with OPC cements or other binders.

Requirement: Use an electric single or double paddle mixer (<600 rpm) with a helical disc-shaped mixing paddle.

Unfilled compound

1. Pour 6,3–6,5 L of clean water into a clean mixing container.
2. Mix the water slowly while gradually adding the complete bag of powder.
3. Mix continuously for 2,0 minutes to achieve a smooth, uniform mix. If necessary, add more water to achieve the required consistency.
4. To allow entrained air to escape and mature, do not mix for ~2 minutes.
5. Mix for a further ~1 minute.

Aggregate filled compound

1. Pour 6,3–6,5 L of clean water into a clean mixing container.
2. Mix the water slowly while gradually adding the

- complete bag of powder.
3. Gradually add 16 kgs of aggregate.
 4. Mix continuously for at least 2,0 minutes to achieve a uniform mix. If necessary, add more water to achieve the required consistency.
 5. To allow entrained air to escape and mature, do not mix for ~2 minutes.
 6. Mix for a further ~1 minute.

APPLICATION

Important: Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Important: Before application, confirm substrate moisture content, relative air humidity, dew point, substrate, air and product temperatures.

Important: Edge and movement joints must be brought through to the finished surface and must be protected so the product will not flow into the joint.

Important: The product must be applied to the required thickness and surface flatness as specified by the floor covering manufacturer.

Important: Use an isolating strip / tape to prevent product bonding onto vertical surfaces, i.e. pipes, ducts, conduits, walls, columns etc.

Important: In a 2-layer application, the 2nd layer must not exceed the 1st layer thickness.

Important: To reduce the risk of cracking, protect freshly applied product from high ambient temperatures, direct sunlight and draughts.

Note: If a pin-leveller (pin-rake) is used instead of a trowel. It avoids having to remove trowel marks with a spike roller or to level more than once.

1. Pour the mixed product onto the substrate.
2. Spread the product evenly using a smoothing trowel, surface blade, screed rake or pin-leveller (pin-rake) to the required thickness.
3. Allow product to smoothen over the substrate.
4. If required, spike roller immediately to remove any trowel marks or surface defects.
5. If a 2nd layer of Sikafloor®-400 Level is to be applied, prime the hardened 1st layer with Sikafloor®-03 Primer or with Sikafloor®-01 Primer (diluted with water 1:1).

Recommended surface conditioning for resin flooring

Note: The tensile adhesion strength of the cured Sikafloor®-400 Level / primer / scratch coat must be at least ~ 1,0 N/mm².

1. After the required Sikafloor®-400 Level waiting time, apply by fleece roller, a double primer coat of Sikafloor®-03 Primer.
2. Allow primer to harden 'tack free'
3. Apply a scratch coat of Sikafloor®-151 + 2 % Extender T.
4. Inspect scratch coat and fill any pores with Sikafloor®-151 + 2 % Extender T.
5. Apply resin flooring product / system

CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using water immediately after use. Hardened / cured material can only be

mechanically removed.

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.

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Product Data Sheet

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