BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-381

Epoxy coating with very good chemical and mechanical resistance

DESCRIPTION

Sikafloor®-381 is a 2-part low-emission epoxy resin coating with very good chemical and mechanical resistance.

USES

Sikafloor®-381 may only be used by experienced professionals.

The Product is used as a:
- Self-smoothing and seal roller coating on concrete and cementitious screeds

Please note:
- The Product may only be used by experienced professionals.
- The Product may only be used for interior applications.

CHARACTERISTICS / ADVANTAGES

- Good resistance to abrasion
- Can be decontaminated fully
- Very good resistance to specific chemicals
- Very good mechanical resistance

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4
- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4

APPROVALS / STANDARDS

- Cleanroom Suitability Sikafloor®, Fraunhofer IPA, Report No. SI 1008-533
- CE marking and declaration of performance based on EN 13813:2002 Screed material and floor screeds — Screed material — Properties and requirements — Synthetic resin screed material
- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating

PRODUCT INFORMATION

Chemical Base	Solvent free epoxy	
Packaging	Container Part A	21.25 kg
	Container Part B	3.75 kg
	Container Part A + Part B	25 kg ready to mix units
	Refer to the current price list for available packaging variations.	

Appearance / Colour	Part A	coloured, liquid
	Part B	transparent, liquid
	Cured appearance	Gloss finish

Exposure to direct sunlight
Note: When the product is exposed to direct sunlight, there may be some discolouration and colour variation. This has no influence on the function and performance of the coating.

Shelf Life	24 months from date of production		
Storage Conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.		
Density	Part A	1.77 kg/l	(EN ISO 2811-1)
	Part B	1.04 kg/l	
	Mixed Product	1.6 kg/l	
Solid Content by Weight	100 %		
Solid Content by Volume	100 %		

TECHNICAL INFORMATION

Shore D Hardness	Cured 7 days at +23 °C	82	(EN ISO 868)
Abrasion Resistance	Cured 7 days at +23 °C	62 mg (CS10 / 1000 g / 1000 cycles)	(EN ISO 5470-1)
Compressive Strength	Cured 14 days at +23 °C	> 80 N/mm²	(EN 13892-2)
Tensile Strength in Flexure	Cured 14 days at +23 °C	> 55 N/mm²	(EN 13892-2)
Tensile Adhesion Strength	> 1.5 N/mm² (failure in concrete)		(EN 1542)
Service Temperature	IMPORTANT **Simultaneous mechanical and chemical strain** While the Product is exposed to temperatures up to +60 °C, simultaneous mechanical or chemical strain may cause damage to the Product. 1. Do not expose the Product to chemical or mechanical strain at elevated temperatures		
	Maximum	+60 °C	

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B (by weight)	85 : 15

Consumption

Function	Consumption
Wearing layer (filled)	1.8 kg/m² per mm
Seal coat or top coat for broadcast systems	0.75-0.85 kg/m²

Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

Product Temperature

Maximum	+30 °C
Minimum	+10 °C

Ambient Air Temperature

Maximum	+30 °C
Minimum	+10 °C

Relative Air Humidity

Maximum	80 % r.h.

Dew Point

Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Low temperatures and high humidity conditions increase the probability of blooming.

Substrate Temperature

Maximum	+30 °C
Minimum	+10 °C

Substrate Moisture Content

Please refer to the product datasheet of the individual epoxy primer.

Pot Life

Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

+10 °C	~ 60 minutes
+20 °C	~ 30 minutes
+30 °C	~15 minutes

Waiting Time / Overcoating

Before applying non-solvented products on Sikafloor®-381 allow:

Temperature	Minimum	Maximum
+10 °C	~24 hours	~3 days
+20 °C	~18 hours	~48 hours
+30 °C	~12 hours	~24 hours

Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

Applied Product Ready for Use

Temperature	Foot traffic	Light traffic	Full cure
+10 °C	~24 hours	~6 days	~7 days
+20 °C	~18 hours	~4 days	~5 days
+30 °C	~12 hours	~2 days	~3 days

Note: Times apply when the last layer of the system has been applied. Times are affected by changing ambient conditions, particularly temperature and relative humidity.

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.

FURTHER DOCUMENTS

Refer to the following method statements:

- Sika Method Statement — Sikafloor® and Sikagard® evaluation and preparation of surfaces
- Sika Method Statement — Sikafloor® mixing and application

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 Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

MIXING EQUIPMENT
- Electric double paddle mixer (>700 W, 300 to 400 rpm)

APPLICATION EQUIPMENT
- Trowels, including serrated
- Short pile roller
- Squeegee

SUBSTRATE QUALITY

IMPORTANT
Incorrect treatment of cracks
The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.
TREATMENT OF JOINTS AND CRACKS
Construction joints and existing static surface cracks in substrate require pre-treating before full layer application. Use Sikadur® or Sikafloor® resins.
SUBSTRATE CONDITION
Cementitious substrates must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm².
Substrates must be clean, dry and free of contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

SUBSTRATE PREPARATION

MECHANICAL SUBSTRATE PREPARATION
IMPORTANT
Surface defects due to voids in the substrate
Voids and blow holes in the substrate will weaken the surface and damage the covering Product if not repaired during the preparation process.
1. Fully expose blow holes and voids during surface preparation to identify the required repairs.
1. Remove weak cementitious substrates.
2. Prepare cementitious substrates mechanically using abrasive blast cleaning, abrasive planing or scarifying equipment to remove cement laitance.
3. Before applying thin layer resins, remove high spots by grinding.
4. Use industrial vacuuming equipment to remove all dust, loose and friable material from the application surface before applying the Product.
5. 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.
SUBSTRATE PREPARATION OF NON-CEMENTITIOUS SUBSTRATES
For information on substrate preparation of non-cementitious substrates, contact Sika® Technical Services.

MIXING

COATING MIXING PROCEDURE
1. Mix Part A (resin) until the coloured pigment is dispersed and a uniform colour is achieved.
2. Add Part B (hardener) to Part A.
3. IMPORTANT Do not mix excessively. Mix Part A + B continuously for ~3 minutes until a uniformly coloured mix is achieved.
4. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
5. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

SELF-SMOOTHING WEARING LAYER MIXING PROCEDURE
1. Mix Part A (resin) until the coloured pigment is dispersed and a uniform colour is achieved.
2. Add Part B (hardener) to Part A.
3. While mixing Parts A + B, gradually add the required filler or aggregates.
4. IMPORTANT Do not mix excessivley. Mix for a further 2 minutes until a uniform mix is achieved.
5. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
6. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

APPLICATION

IMPORTANT
Protect from moisture
After application, protect the Product from damp, condensation and direct water contact for at least 24 hours.
IMPORTANT
Temporary moisture barrier
If the substrate moisture content measured with the CM-method is > 4% by weight, apply a temporary moisture barrier consisting of Sikafloor® EpoCem®.
1. Contact Sika technical services for more information.

IMPORTANT
No application on rising moisture
Do not apply on substrates with rising moisture.
IMPORTANT
Ensuring consistent colour matching
For consistent colour matching, make sure the Product in each area is applied from the same control batch numbers.
SEAL COAT FOR BROADCAST SURFACES
1. Pour the mixed Product onto the substrate. Note The consumption is specified in Application Information.
2. Spread the Product evenly over the surface with a squeegee.
3. Back-roll the surface in two directions at right angles with a fleece roller. Note Maintain a "wet edge" during application to achieve a seamless finish.

SLIP-RESISTANT BROADCAST LAYER
1. Pour the mixed Product onto the prepared substrate.
2. Apply the Product evenly over the surface with a trowel.
3. Back-roll the surface in two directions at right angles with a spike roller.
4. Allow the product to cure for 15 minutes. Note Times are temperature dependant. Times given are for +20 °C.

5. Broadcast the surface with quartz sand or silicon carbide, lightly at first, then to excess.Note The aggregate is dependant on the system build-up. Refer to the relevant System Data Sheet.
6. Allow the surface to become tack-free.
7. Remove all loose sand with industrial vacuuming equipment.

SELF-SMOOTHING WEARING LAYER APPLICATION

1. Pour the mixed Product onto the substrate. Note The consumption is specified in Application Information.
2. Apply the Product evenly over the surface with a serrated trowel.
3. Back-roll the surface in two directions at right angles with a spike roller. Note Maintain a "wet edge" during application to achieve a seamless finish.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be removed mechanically.

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 HONGKONG LTD.
Rm.1507-12, Blk A, New Trade Plaza,
6 On Ping Street, Shatin, N.T., H.K.
Phone: +852 26868108
Fax: +852 26453671
Mail: marketing@hk.sika.com
Website: www.sika.com.hk