BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-1590

Low-odour, fast-curing epoxy primer

PRODUCT DESCRIPTION

Sikafloor®-1590 is a 2-part, low-odour, fast curing epoxy resin based primer and scratch coat for flooring applications.

USES

Sikafloor®-1590 may only be used by experienced professionals.

Sikafloor®-1590 is used as a:
- Primer for concrete substrates, cement screeds and epoxy mortars
- Primer for low to medium absorbent substrates
- Primer for Sika® epoxy and polyurethane flooring systems

CHARACTERISTICS / ADVANTAGES

- Fast curing
- Good bond strength
- Good penetration
- Low VOC emissions
- Low odour

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4
- Belgian Regulation Attestation, Eurofins
- French regulation on indoor VOC emissions class A+
- VOC emission classification GEV Emicode EC1^{plus}
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / STANDARDS

- 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
- DIN EN 13578: Products and systems for the protection and repair of concrete structures – Test method – Compatibility on wet concrete, Test Report No. P 13577a E by Kiwa Polymer Institute
- Bond strength on contaminated concrete EN 1542, Sikafloor-1590 used as the primer of the system with Sikafloor®-60 Buster as cleaning agent. Test Report No. P 14322-E by Kiwa Polymer Institute

PRODUCT INFORMATION

Chemical Base	Solvent-free epoxy	
Packaging	Container Part A	25.5 kg
	Container Part B	4.5 kg
	Container Part A + Part B	30 kg, ready to mix unit

Appearance / Colour	Part A	Brownish-transparent, liquid	
	Part B	transparent, liquid	
Shelf Life	24 months from the 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	~1.49 kg/l	(EN ISO 2811-1)
	Part B	~1.00 kg/l	
	Mixed Product	~1.39 kg/l	
Solid content by mass	~100 %		
Solid content by volume	~100 %		

TECHNICAL INFORMATION

Tensile adhesion strength	> 1.5 N/mm² (failure in concrete)	(EN 1542)

APPLICATION INFORMATION

Mixing Ratio

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

Sikafloor®-54 Booster
Note: Add between 2 % and 4 % of Sikafloor®-54 Booster, by weight of the mixed resin, to the Product to decrease the waiting times.

Consumption

Application type	Product	Consumption
Priming	1–2 × Sikafloor®-1590 + max 4 % by weight Sikafloor®-54 Booster	1–2 × 0.35–0.55 kg/m²
Scratch coat (surface roughness < 2 mm)	1 pbw Sikafloor®-1590 + 0.5 pbw quartz sand (0.1–0.3 mm) + max 4 % by weight Sikafloor®-54 Booster	1.7 kg/m²per mm thickness

For fast curing, use Sikafloor®-54 Booster. Adjust the Booster ratio based on application temperature, ensuring it does not exceed 4% by weight. Sikafloor®-1590 can also be used without the Sikafloor®-54 Booster.

Product Temperature	Maximum	+23 °C
	Minimum	+8 °C
Ambient Air Temperature	Maximum	+30 °C
	Minimum	+8 °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	+23 °C
	Minimum	+8 °C

Substrate Moisture Content

Substrate	Test method	Moisture content
Cementitious substrates	Calcium carbide method (CM method)	≤ 4 %

No rising moisture (ASTM D4263, polyethylene sheet)

Temporary moisture barrier

Note: 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.

Pot Life

Temperature	Without Sikafloor®-54 Booster	With 2 % Sikafloor®-54 Booster	With 4 % Sikafloor®-54 Booster
+8 °C	~90 minutes	~75 minutes	~70 minutes
+10 °C	~90 minutes	~70 minutes	~55 minutes
+15 °C	~50 minutes	~40 minutes	~35 minutes
+23 °C	~30 minutes	~15 minutes	-

Waiting Time / Overcoating

Before overcoating the Product allow the following waiting times:

WITHOUT SIKAFLOOR®-54 BOOSTER ADDED

Temperature	Minimum without Sikafloor®-54 Booster	Maximum without Sikafloor®-54 Booster
+8 °C	~8 hours	~3 days
+10 °C	~6 hours	~3 days
+15 °C	~5 hours	~48 hours
+23 °C	~3 hours	~24 hours

WITH 2 % SIKAFLOOR®-54 BOOSTER ADDED

Temperature	Minimum with 2 % Sikafloor®-54 Booster	Maximum with 2 % Sikafloor®-54 Booster
+8 °C	~7 hours	~3 days
+10 °C	~5 hours	~3 days
+15 °C	~4 hours	~48 hours
+23 °C	~2 hours	~24 hours

WITH 4 % SIKAFLOOR®-54 BOOSTER ADDED

Temperature	Minimum with 4 % Sikafloor®-54 Booster	Maximum with 4 % Sikafloor®-54 Booster
+8 °C	~6 hours	~3 days
+10 °C	~4 hours	~3 days
+15 °C	~3 hours	~48 hours

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

VALUE BASE

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 — Evaluation and preparation of surfaces for flooring systems
- Sika Method Statement — Sikafloor® mixing and application

ECOLOGY, HEALTH AND 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.

APPLICATION INSTRUCTIONS

EQUIPMENT

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

APPLICATION EQUIPMENT
- Short-pile roller

SUBSTRATE QUALITY

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.
- 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.
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.

MIXING

IMPORTANT
Higher amounts of Sikafloor®-54 Booster at higher ambient temperatures
If more than 2 % of Sikafloor®-54 Booster is added at ambient temperatures higher than +15 °C, the exothermic reaction increases and the product will start foaming very quickly.
IMPORTANT
Foaming due to exothermic reaction
After the end of the Product's pot life the exothermic reaction of the Product leads to foaming.
- At the end of the Product's pot life, fill the container completely with quartz sand to stop the exothermic reaction.

Note: To increase the viscosity of the Product you can add Sika® Extender T.

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. Mix continuously for 3 minutes, until a uniform mix is achieved.
4. If necessary, gradually add the required amount of Sikafloor®-54 Booster.
5. If additional materials were added, mix for a further 2 minutes until a uniform mix is achieved.
6. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
7. 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
No application on rising moisture
Do not apply on substrates with rising moisture.
IMPORTANT
Protect from moisture
After application, protect the Product from damp, condensation and direct water contact for at least 24 hours.
IMPORTANT
Damaged finish due to heating with fossil fuel heaters
Fossil fuel heaters powered by gas, oil or paraffin produce large quantities of both carbon dioxide and water vapour, which may adversely affect the finish.

1. For temporary heating, use only electrically powered warm air blower systems. Do not use gas, oil, paraffin or other fossil fuel heaters.

IMPORTANT
Pin holes caused by application during rising temperature
If the Product is applied on porous substrates during rising temperature, pin holes may form from rising air.

1. Apply the Product during falling temperatures.

IMPORTANT

Closing Pin holes

If pin holes are present after the Product has cured blistering may occur in the subsequent layer. Close any pin holes using the following steps.

1. Lightly grind the cured surface.
2. Apply a scratch coat consisting of the Product mixed with ~3 % of Sika® Extender T.

STANDARD PRIMER 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 short pile roller or 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.
4. If broadcasting is required, wait between 15 and 30 minutes, then broadcast the surface with quartz sand. Broadcast lightly at first, then to excess.
5. IMPORTANT Confirm waiting or overcoating time is achieved before applying subsequent products. (Refer to the "waiting time to overcoating" section of Application Information) Once the product has hardened sufficiently, remove all loose sand with industrial vacuuming equipment.

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.

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