BUILDING TRUST

PRODUCT DATA SHEET

# Sikafloor®-151

Epoxy primer, levelling mortar and mortar screed

## DESCRIPTION

Sikafloor®-151 is a 2-part, low viscosity, multipurpose, epoxy resin. It can be used as an epoxy primer, levelling mortar and mortar screed.

## USES

Sikafloor®-151 may only be used by experienced professionals.

The product can be used as a:
- Primer for concrete substrates, cement screeds and epoxy mortars
- Primer for low to medium absorbent substrates
- Primer for all Epoxy and Polyurethane flooring systems
- Binder for levelling mortars and mortar screeds

## CHARACTERISTICS / ADVANTAGES

- Easy application
- Low viscosity
- Good penetration
- Good bond strength
- Fast curing
- Multi-purpose

## ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization — Environmental Product Declarations
- Conformity with LEED v4 MRc 4 (Option 2): Building Product Disclosure and Optimization — Material Ingredients
- Conformity with LEED v4 EQc 2: Low-Emitting Materials

## APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13813:2002 — Screed material and floor screeds — Screed material
- CE Marking and Declaration of Performance to EN 1504-2:2004 — Products and systems for the repair and protection of concrete structures — Part 2: Surface protection systems for concrete — Coating
- Bond Behavior DIN EN 13578, Sikafloor®-151 + Sikafloor®-264 N, kiwa, Test report No. P 12091-2 E

## PRODUCT INFORMATION

| | | |
|---|---|---|
| **Chemical Base** | Solvent free epoxy | |
| **Packaging** | Part A container | 25,5 kg container |
| | Part B container | 4,5 kg container |
| | Part A + Part B | 30 kg ready to mix units |
| | Part A drum | 225 kg drum |
| | Part B drum | 180 kg drum |
| | Part A + Part B | 4 Drums Part A (255kg) + 1 drum Part B (180 kg) = 1200 kg |

| | | |
|---|---|---|
| **Appearance / Colour** | Part A | Brownish-transparent, liquid |
| | Part B | Transparent, liquid |
| **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. | |
| **Density** | Part A | ~1,66 kg/l (EN ISO 2811-1) |
| | Part B | ~0,99 kg/l |
| | Mixed Product | ~1,47 kg/l |
| **Solid content by weight** | ~100 % | |
| **Solid content by volume** | ~100 % | |

## TECHNICAL INFORMATION

| | | |
|---|---|---|
| **Shore D Hardness** | ~80 (7 days / +23 °C / 50 % r.h.) | (EN ISO 868) |
| **Tensile Adhesion Strength** | > 1,5 N/mm² (failure in concrete) | |

## SYSTEM INFORMATION

**Systems**

The product can be used in the following systems:
- Sikafloor® MultiDur
- Sikafloor® MultiFlex
- Sikafloor® PurCem®
- Sikafloor® ComfortFloor®
- Sikafloor® OneShot
- Sikafloor® MonoFlex
- Sikafloor® DecoDur

**Primer**

| | |
|---|---|
| Low / medium porosity concrete | 1–2 × Sikafloor®-151 |

**Levelling mortar fine**
(Surface roughness <1 mm)

| | |
|---|---|
| Primer | 1–2 × Sikafloor®-151 |
| Levelling mortar | 1 × Sikafloor®-151 + quartz sand (0,1–0,3 mm) |

**Levelling mortar medium**
(Surface roughness up to 2 mm)

| | |
|---|---|
| Primer | 1–2 × Sikafloor®-151 |
| Levelling mortar | 1 × Sikafloor®-151 + quartz sand (0,1–0,3 mm) |

**Intermediate layer**
(Self-smoothing 1,5 to 3 mm)

| | |
|---|---|
| Primer | 1 × Sikafloor®-151 |
| Levelling mortar | 1 × Sikafloor®-151 + quartz sand (0,1–0,3 mm) |

**Epoxy screed / repair mortar**
(15–20 mm layer thickness per layer)

| | |
|---|---|
| Primer | 1–2 × Sikafloor®-151 |
| Bonding bridge | 1 × Sikafloor®-151 |
| Screed / repair mortar | 1 × Sikafloor®-151 + suitable sand mixture |

The following sand mixtures are indicative mix design quantities that must be confirmed by pre-trials.
Grain size distribution for layer thicknesses of 15–20 mm , parts by weight (pbw):

- 25 pbw quartz sand 0,1–0,5 mm
- 25 pbw quartz sand 0,4–0,7 mm
- 25 pbw quartz sand 0,7–1,2 mm
- 25 pbw quartz sand 2–4 mm

Note: The largest grain size must be a maximum 1/3 of the finished layer thickness. Dependent on the grain shape and application temperatures, the sand and the most suitable mix must be selected and confirmed by pretrials.

## APPLICATION INFORMATION

**Mixing Ratio**

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

**Consumption**

| Floor System | Product | Consumption |
|---|---|---|
| Priming | 1–2 x Sikafloor®-151 | 1–2 × 0,35–0,55 kg/m² |
| Levelling mortar fine (surface roughness < 1 mm) | 1 pbw Sikafloor®-151 + 0,5 pbw quartz sand (0,1–0,3 mm) | 1,7 kg/m²/mm |
| Levelling mortar medium (surface roughness up to 2 mm) | 1 pbw Sikafloor®-151 + 1 pbw quartz sand (0,1–0,3 mm) | 1,9 kg/m²/mm |
| Intermediate layer (self-smoothing 1,5 to 3 mm) | 1 pbw Sikafloor®-151 + 1 pbw quartz sand (0,1–0,3 mm) + optional broadcast quartz sand 0,4–0,7 mm | 1,9 kg/m²/mm ~4,0 kg/m² |
| Bonding bridge | 1–2 × Sikafloor®-151 | 1–2 × 0,3–0,5 kg/m² |
| Epoxy screed (15–20 mm layer thickness) / Repair mortar | 1 pbw Sikafloor®-151 + 6 pbw quartz sand | 2,2 kg/m²/mm |

These figures are theoretical and do not allow for any additional material required due to surface porosity, surface profile, variations in level or wastage etc.

**Product Temperature**

| | |
|---|---|
| Minimum | +10 °C |
| Maximum | +30 °C |

**Ambient Air Temperature**

| | |
|---|---|
| Minimum | +10 °C |
| Maximum | +30 °C |

**Relative Air Humidity**

80 % r.h. max

**Dew Point**

Beware of condensation. The substrate and uncured applied floor material 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**

| | |
|---|---|
| Minimum | +10 °C |
| Maximum | +30 °C |

**Substrate Moisture Content**

≤ 6 % parts by weight.

**Pot Life**

| | |
|---|---|
| +10 °C | ~50 minutes |
| +20 °C | ~25 minutes |
| +30 °C | ~15 minutes |

**Curing Time**

Before applying non-solvented products on Sikafloor®-151 allow:

| Substrate temperature | Minimum | Maximum |
|---|---|---|
| +10 °C | 24 hours | 4 days |
| +20 °C | 12 hours | 2 days |
| +30 °C | 8 hours | 24 hours |

Before applying solvented products on Sikafloor®-151 allow:

| Substrate temperature | Minimum | Maximum |
|---|---|---|
| +10 °C | 60 hours | 6 days |
| +20 °C | 36 hours | 4 days |
| +30 °C | 28 hours | 2 days |

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

**Waiting Time / Overcoating**

Before applying non-solvent based products on the product allow:

| Substrate temperature | Minimum | Maximum |
|---|---|---|
| +10 °C | ~24 hours | ~4 days |
| +20 °C | ~12hours | ~2 days |
| +30 °C | ~8 hours | ~24 hours |

Before applying solvent based products on the product allow:

| Substrate temperature | Minimum | Maximum |
|---|---|---|
| +10 °C | ~60 hours | ~6 days |
| +20 °C | ~36 hours | ~4 days |
| +30 °C | ~28 hours | ~2 days |

Times are approximate and will be 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.

## 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.

### DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type sb) 500 g/l (Limit 2010) for the ready to use product. The maximum content of Sikafloor®-151 is < 500 g/l VOC for the ready to use product.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

### MIXING EQUIPMENT

Electric single paddle mixer (300–400 rpm)

### SUBSTRATE QUALITY / PRE-TREATMENT

### TREATMENT OF JOINTS AND CRACKS

Construction joints and existing static surface cracks in substrate require pre-treating with a stripe coat by prefilling and levelling to seal against loss of material through the joint or cracks before full layer application. Use Sikadur® or Sikafloor® resins. Construction joints and existing static surface cracks in substrate require pretreating with a stripe coat. Prefill and level using Sikadur® or Sikafloor® resins to seal against loss of material through the joint or cracks before full layer application

SUBSTRATE MOISTURE CONTENT

The following test methods can be used to determine the substrate moisture content:

- Sika®-Tramex meter
- CM-measurement
- Oven-dry-method

The product can be installed on substrates with a moisture content of ≤6 % (measured by Sika®-Tramex meter). The substrate must be visibly dry with no standing water.

### SUBSTRATE CONDITION

Cementitious substrates (concrete / screed) must be structurally sound and of sufficient compressive strength (minimum 25 N/mm2) with a minimum tensile strength of 1,5 N/mm2. Substrates can be damp but must be free of standing water (no puddles) clean and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

### MECHANICAL SUBSTRATE PREPARATION

Remove weak cementitious substrates. Prepare ce-

mentitious substrates mechanically using abrasive blast cleaning or planing / scarifying equipment to remove cement laitance. Use industrial vacuuming equipment to remove all dust, loose and friable material from the application surface before applying the product. 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.

## MIXING

**Important:** do not use free fall mixers
Note: to change the viscosity of the product Sika® Extender T can be added.

### 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. Mix Part A + B continuously for 3,0 minutes until a uniformly coloured mix is achieved.
4. **(Optional)** Where necessary, gradually add between 0,5 % and 1,5 % by weight of flooring resin of Sika® Extender T.
5. **(Optional)** Mix for a further 2,0 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:** after application, protect the Product from damp, condensation and direct water contact (rain) for at least 24 hours.
**Important:** do not apply on substrates with rising moisture.
**Important:** If temporary heating is required do not use gas, oil, paraffin or other fossil fuel heaters. These produce large quantities of both carbon dioxide and water vapour, which may adversely affect the finish. For heating, use only electric powered warm air blower systems.

### STANDARD PRIMER APPLICATION

**Equipment:**

- Fleece roller
- Squeegee
- Brush

1. Apply the product other with one of the tools specified in Equipment.
2. Pour the mixed product onto the substrate. Note: The consumption is specified in Application Information.
3. Back roll the surface in two directions at right angles with a fleece roller. **Important:** Make sure that the coat on the substrate is contiuous and pore free. **Important:** Confirm waiting /overcoating time is achieved before applying subsequent products. (Refer to waiting / overcoating times in Application Information)

### LEVELLING MORTAR

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 squeegee.

### INTERMEDIATE LAYER

**Equipment:**

1. Pour the mixed product onto the substrate. Note: The consumption is specified in Application Information.
2. Apply the product other with one of the tools specified in Equipment.
3. Back roll the surface in two directions at right angles with a spike roller.
4. **(Optional)** 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. **(Optional)** Allow the surface of the product to become tack free.
6. **(Optional)** Remove all loose sand with industrial vacuuming equipment. **Important:** Confirm waiting /overcoating time is achieved before applying subsequent products. (Refer to waiting / overcoating times in Application Information)

### BONDING BRIDGE

**Equipment:**

- Fleece roller
- Squeegee
- Brush

1. Apply the product other with one of the tools specified in Equipment.
2. Pour the mixed product onto the substrate. Note: The consumption is specified in Application Information.
3. Back roll the surface in two directions at right angles with a fleece roller. **Important:** Make sure that the coat on the substrate is contiuous and pore free. Important: Confirm waiting /overcoating time is achieved before applying subsequent products. (Refer to waiting / overcoating times in Application Information)
4. **(Optional)** If required, apply a second priming coat.

### RESIN SCREED

**Important:** For applications in layer thickness's more than 30 mm, always use a welded steel wire mesh (6–8 mm diameter and square grid centres of ~100 × 100 mm), placed at the centre of the screed

1. Pour the mixed product "wet on wet" onto the still tack primer. Note: The consumption is specified in Application Information.
2. Spread and compact the product with a trowel to the required thickness between screed rails / battens, if installed.
3. Level the screed surface with a levelling beam spanning onto the screed rails / battens.
4. Finish the surface to the required surface texture with trowels or walk-behind power floats.

**RESIN PATCH REPAIR MORTAR**

1. Pour the mixed product "wet on wet" onto the still tack primer.
2. Apply the product with a trowel to the required thickness.
3. Compact the applied product with a trowel.
4. Smoothen the surface with a trowel. **Important:** Confirm waiting /overcoating time is achieved before applying subsequent products. (Refer to waiting / overcoating times in Application Information)

## 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 South Africa (Pty) Ltd**
9 Hocking Place,
Westmead, 3608
South Africa
Phone +27 31 792 6500
www.sika.co.za