BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-390 N

EPOXY BASED CRACK-BRIDGING AND CHEMICALLY RESISTANT WALL AND FLOORING RESIN

PRODUCT DESCRIPTION

Sikafloor®-390 N is a 2-part epoxy, coloured, crack-bridging, wall and flooring resin. Provides a hard wearing, seamless, low maintenance, chemical and abrasion resistant, smooth gloss finish or slip resistant finish when broadcast with different aggregate grades. Varying thickness's can be achieved from 1.5–3.0 mm. Internal and external use.

USES

Sikafloor®-390 N may only be used by experienced professionals.

- Chemically resistant protective finish for concrete and screed substrates in bund areas against contaminating liquids.

CHARACTERISTICS / ADVANTAGES

- High chemical resistance
- Crack-bridging
- Waterproof
- Good abrasion resistance
- Slip resistant surface to suit clients requirements

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 MRc 2 (Option 1): Building-Product Disclosure and Optimization – EnvironmentalProduct Declarations
- Conformity with LEED v4 MRc 4 (Option 2): Building-Product Disclosure and Optimization - Material Ingredients

APPROVALS / STANDARDS

- Fire classification in accordance with DIN 4102, class B1, Report-No. PZ-Hoch-130683-4, Germany, April2014.
- Fire classification in accordance with DIN EN 13501-1:2010, class Bfl-S1, Report-No. KB-Hoch-141525, Germany, January, 2015
- Particle emission certificate Sikafloor-390 N CSM Statement of Qualification - ISO 14644-1, class 3 - Report No.SI 1403-695 and GMP class A, Report No.1403-695
- Outgassing emission certificate Sikafloor-390 N CSM Statement of Qualification - ISO 14644-8, class -9.6 - Report No. SI 1403-695.
- Good biological Resistance in accordance with ISO 846, CSM Report No. SI 1403-695
- Fluorescent test contamination (Riboflavin test) : very good, CSM Statement of Qualification, ReportNo.SI 1403-695

- Water protection system Sikafloor®-390 N, DIBt, Approval No. Z-59.12-392
- Indirect food contact Sikafloor®-390 N, Wessling, Test report No. CAL 19-024852-1
- CE Marking and Declaration of Performance to EN 13813 - Resin screed material for internal use in buildings
- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - coating.

PRODUCT INFORMATION

Chemical Base	Epoxy
Packaging	Part A: 21,25 kg containers Part B: 3,75 kg containers Part A+B: 25 kg ready to mix units Refer to current price list for packaging variations
Appearance / Colour	Final floor appearance: Smooth gloss / semi gloss finish Resin - part A: coloured, liquid Hardener - part B: transparent, liquid Final floor finish colour: Available in various colour shades Applied colours selected from colour charts will be approximate.For colour matching: Apply colour sample and confirm selected colour under real lighting conditions. When 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.Product can be used outside provided discolouration is acceptable by the customer.
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: ~ 1.73 kg/l (DIN EN ISO 2811-1) Part B: ~ 1.05 kg/l Mixed resin: ~ 1.6 kg/l All Density values at +23 °C
Solid content by weight	~100 %
Solid content by volume	~100 %
Product Declaration	EN 13813: Resin screed material for internal use in buildings.EN 1504-2: Surface protection product for concrete - Coating.

TECHNICAL INFORMATION

Shore Hardness	Shore D: 60 (14 days / +23 °C)	(DIN 53 505)
Abrasion Resistance	75 mg (CS 10/1000/1000) (7 days / +23 °C)	(EN ISO 5470-1 Taber Abraser Test)
Flexural Strength	~ 10 N/mm² (7 days / +23 °C)	(DIN 53455)
Elongation at Break	~ 20 % (7 days / +23 °C)	(DIN EN ISO 527-2)
Tensile Adhesion Strength	> 1.5 N/mm² (failure in concrete)	(ISO 4624)
Crack Bridging Ability	0.4 mm Static, Class A5 (+23 °C)	(DIN EN 1062-7)
Chemical Resistance	Resistant to many chemicals. Contact Sika Technical Services for additional information.	

Thermal Resistance

Exposure*	**Dry heat**
Permanent	+50 °C
Short-term max. 7 d	+80 °C
Short-term max. 12 h	+100 °C

Short-term moist/wet heat* up to +80 °C where exposure is only occasional (i.e. during steam cleaning etc.)
*No simultaneous chemical and mechanical exposure.

SYSTEM INFORMATION

Systems	Refer to the following System Data Sheets: ▪ Sikafloor® Multidur ES-39 ▪ Sikafloor® Multidur ET-39V ▪ Sikafloor® Multidur EB-39
Mixing Ratio	Part A : Part B = 85 : 15 (by weight)
Consumption	**Wall top coat (textured)** ~1.2 kg/m² per layer (Includes 2.5–4 % by weight Extender T) **Wearing layer** ~1.6 kg/m² / mm **Broadcast layer seal / top coat** ~0.75-0.85 kg/m² (Includes 5 % by weight Thinner C) **General** These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc. For detailed information, refer to the System Data Sheets: Sikafloor® MultiDur ES-39, Sikafloor® MultiDur ET-39 V and Sikafloor® MultiDur EB-39.
Layer Thickness	Refer to the System Data Sheets: Sikafloor® MultiDur ES-39, Sikafloor® MultiDur ET-39 V and Sikafloor® MultiDur EB-39
Ambient Air Temperature	+10 °C min. / +30 °C max.
Relative Air Humidity	80 % 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 floor finish. Low temperatures and high humidity conditions increase the probability of blooming.
Substrate Temperature	+10 °C min. / +30 °C max.
Substrate Moisture Content	≤4 % parts by weight Test method: Sika®-Tramex meter, CM-measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene sheet).

Pot Life

Temperature	Time
+10 °C	~60 minutes
+20 °C	~30 minutes
+30 °C	~10 minutes

Curing Time

Before applying Sikafloor®-390 N on Sikafloor®-390 N allow:

Substrate temperature	Minimum	Maximum
+10°C	48 hours	3 days
+20°C	30 hours	2 days
+30°C	20 hours	30 hours

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

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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 must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.Cementitious substrates must be prepared mechanically using suitable abrasive blast cleaning or planing / scarifying equipment to remove cement laitance and achieve an open textured gripping surface profile suitable for the product thickness.High spots can be removed by grinding.Weak cementitious substrates must be removed and surface defects such as blow holes and voids must be fully exposed. Repairs to the substrate, filling of cracks, blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials. Products must be cured before applying Sikafloor®-390 N. All dust, loose and friable material must be completely removed from all surfaces before application of the product and associated system products, preferably by vacuum extraction equipment.

MIXING

Prior to mixing all parts, mix separately Part A (resin) using a low speed single paddle electric stirrer

(300–400 rpm). Add Part B (hardener) to Part A and mix part A + B continuously for 3 minutes until a uniform mix has been achieved. When Parts A and B have been mixed, if required , gradually add Extender T or Thinner C. Mix for a further 2 minutes until a uniform mix has been achieved. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth consistent mix. Over Excessive mixing must be avoided to minimise air entrainment. 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. Mix full units only. Mixing time for A+B = 3 minutes. A+B+Extender T= 5 minutes.

APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.Prior to application, confirm substrate oisture content, relative air humidity, dew point, substrate, air and product temperatures. If moisture content > 4 % parts by weight, Sikafloor® EpoCem® may be applied as a Temporary Moisture Barrier (T.M.B.) system. **Wall top coat (textured)** The first coat of Sikafloor®-390 N mixed with 2.5- 4 % of Extender T, must be applied by trowel. After waiting the appropriate curing time, apply a second coat of Sikafloor®-390 N, mixed with 2.5- 4 % of Extender T by trowel. **Wearing layer** Pour mixed Sikafloor®-390 N onto prepared substrate and spread evenly using a suitable trowel or pin leveller to the required thickness. Spike roller immediately in two directions at right angles to each other to remove trowel marks, aid air release, ensure an even thickness and obtain the required surface finish. **Slip resistant broadcast layer** Pour mixed Sikafloor®-390 N onto prepared substrate and spread evenly using a suitable trowel or pin leveller to the required thickness. Spike roller immediately in two directions at right angles to each other to aid air release and ensure an even thickness. After about 15 minutes (at +20 °C) but before 30 minutes (at +20 °C), broadcast with quartz sand or silicon carbide, at first lightly and then to excess to produce an even distribution surface profile. Allow Sikafloor®-390 N to initially cure and remove all loose sand by vacuum extraction equipment. **Broadcast layer seal / top coat** After waiting the appropriate curing time, pour the mixed Sikafloor®-390 N + 5 % by weight Thinner C onto the slip resistant broadcast layer and spread evenly using a squeegee at the required consumption rate to completely encapsulate the sand. Then using a short-piled roller, back roller in two directions at right angles to each other. A seamless finish can be achieved if a ‘wet’ edge is maintained during application.

CLEANING OF TOOLS

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

MAINTENANCE

To maintain the appearance of the floor after application, Sikafloor®-390 N must have all spillages removed immediately and must be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc using suitable detergents and waxes

FURTHER DOCUMENTS

- Sika® Information Manual: Evaluation and Preparation of Surfaces for Flooring Systems
- Sika® Information Manual: Mixing & Application of Flooring Systems
- Sika® Information Manual: Sikafloor®-Cleaning Regime
- System Data Sheet: Sikafloor® MultiDur ES-39
- System Data Sheet: Sikafloor® MultiDur ET-39 V
- System Data Sheet: Sikafloor® MultiDur EB-39

LIMITATIONS

- After application, product must be protected from
- damp, condensation and direct water contact (rain) for at least 24 hours.
- For areas with limited exposure and normal absorbent concrete substrates. Priming with Sikafloor®-156/-161 is not necessary for roller or textured coating systems.
- 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.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective surface cracking.
- If product is used for roller / textured sealer coats. Uneven and / or dirty substrates must not be considered for thin coating application. All areas must always be prepared and cleaned thoroughly prior to application.
- For exact colour matching, ensure the Sikafloor®-390 N in each area is applied from the same control batch numbers.
- Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading, may lead to indentations in the resin.
- If temporary heating is required, do not use gas, oil, paraffin or other fossil fuel heaters, these produce large quantities of both CO_2 and H_2O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.
- Seal / Top coat consumption will vary depending on sand granulometry.
- Do not apply on substrates with rising moisture.
- Do not blind the primer.

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regula-

tions 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.

ECOLOGY, HEALTH AND SAFETY

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

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / x type xx) is 500 g/l (Limits 2010) for the ready to use product.
The maximum content of Sikafloor®-390 N is ≤ 500 g/l VOC for the ready to use product.

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.

SIKA LIMITED
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited

SIKA IRELAND LIMITED
Ballymun Industrial Estate
Ballymun
Dublin 11, Ireland
Tel: +353 1 862 0709
Web: www.sika.ie
Twitter: @SikaIreland