

## Sikafloor®-390

### 2-Part Flexible and Chemically Resistant Epoxy Coating

**Product Description** Sikafloor®-390 is a two-part, flexible, coloured epoxy resin with high chemical resistance. Suitable for use in hot and tropical climates.

**Uses** ■ Crack-bridging and chemically resistant coating for concrete and screed surfaces in bund areas for the protection against water contaminating liquids (according to the product chemical resistance table)

**Characteristics / Advantages** ■ High chemical resistance  
■ Crack-bridging  
■ Liquid proof

#### Test

**Approval / Standards** Approval as "Water protection system", Z-59.12-107, DIBt, Germany

#### Product Data

**Form** Liquid

**Appearance / Colours** Resin - part A: coloured  
Hardener - part B: transparent  
Almost unlimited choice of colour shades.  
Under direct sun radiation there may be some discolouration and colour deviation, this has no influence on the function and performance of the coating.

**Packaging** Part A: 21.25 kg containers  
Part B: 3.75 kg containers  
Part A+B: 25.00 kg ready to mix units

#### Storage

**Storage Conditions / Shelf-Life** 12 months from date of production if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.

#### Technical Data

**Chemical Base** Epoxy

**Density (at +23°C)** Part A: ~ 1.73 kg/l  
Part B: ~ 1.05 kg/l  
Mixed resin: ~ 1.60 kg/l (DIN EN ISO 2811-1)

**Solid Content** ~ 100% (by volume), ~100% (by weight)



## Mechanical / Physical Properties

<b>Flexural Strength</b>	~ 10 N/mm <sup>2</sup> (8 days / +23°C)	(DIN 53455)
<b>Bond Strength</b>	> 1.5 N/mm <sup>2</sup> (failure in concrete)	(ISO 4624)
<b>Shore D Hardness</b>	60 (after 14 days / +23°C)	(DIN 53 505)
<b>Elongation at Break</b>	~ 20% (8 days / +23°C)	(DIN 53455)
<b>Abrasion Resistance</b>	75 mg (CS 10/1000/1000) (8 days / +23°C)	(DIN 53 109) (Taber Abrader Test)
<b>Crack Bridging Capacity</b>	~ 0.25 mm, static 2 years	ZG (German Standard for water protection)

## Resistance

**Chemical Resistance** Resistant against many chemicals. Please ask for a detailed chemical resistance table.

### Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C
Short-term max. 7 days	+80°C
Short-term max. 12 hours	+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

### System Structure

*Self-smoothing system (horizontal areas):*

Primer: 1 x Sikafloor®-156  
Screed: 1 x **Sikafloor®-390**

*Smooth wearing course (vertical areas):*

Primer: 1 x Sikafloor®-156  
Screed: 2 x **Sikafloor®-390** + Extender T

*Broadcast system with slip resistance (rigid):*

Primer: 1 x Sikafloor®-156  
Wearing course: 1 x **Sikafloor®-390** broadcast to excess with Silicon carbide or quartz sand  
Seal coat: 1 x **Sikafloor®-390** + 5% pbw Thinner C

*Broadcast system with slip resistance (crack-bridging):*

Primer: 1 x Sikafloor®-156  
Wearing course (1<sup>st</sup> coat): 1 x **Sikafloor®-390**  
Wearing course (2<sup>nd</sup> coat): 1 x **Sikafloor®-390** broadcast to excess with Silicon carbide or quartz sand  
Seal coat: 1 x **Sikafloor®-390** + 5% pbw Thinner C

## Application Details

### Consumption / Dosage

Coating System	Product	Consumption
Priming	Sikafloor®-156	0.3 - 0.5 kg/m <sup>2</sup>
Levelling (optional)	Sikafloor®-156 mortar	Refer to PDS of Sikafloor®-156
Wearing course horizontal areas (1.8 - 2.8 mm)	<b>Sikafloor®-390</b>	1.6 kg/m <sup>2</sup> /mm
Wearing course vertical areas (Film thickness ~ 1.5 mm)	<b>Sikafloor®-390</b> + 2.5 - 4% pbw Extender T	2 x 1.25 kg/m <sup>2</sup>
Wearing course with slip resistance (Film thickness ~ 2.5 mm)	<b>Sikafloor®-390</b> broadcast to excess with Silicon Carbide 0.5 - 1.0 mm or quartz sand 0.4 - 0.7 mm	1.6 kg/m <sup>2</sup> Binder without filling
		Silicon Carbide 0.5 - 1.0 mm or quartz sand 0.4 - 0.7 mm (5-6 kg/m <sup>2</sup> )
Seal coat (for broadcast systems only)	<b>Sikafloor®-390</b> + 5% Thinner C	0.75 - 0.85 kg/m <sup>2</sup>

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

### Substrate Quality

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm<sup>2</sup>) with a minimum pull off strength of 1.5 N/mm<sup>2</sup>.

The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc..

If in doubt apply a test area first.

### Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve a profiled open textured surface.

Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.

Repairs to substrate, filling of blowholes/voids and surface levelling can be carried out using appropriate products from the Sikafloor®, SikaDur® and SikaGard® range of materials.

The concrete or screed substrate has to be primed or levelled up in order to achieve an even surface. Unevenness influences the film thickness and thus the conductivity of the following layer.

High spots must be removed by e.g. grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

### Application Conditions / Limitations

**Substrate Temperature** +10°C min. / +30°C max.

**Ambient Temperature** +10°C min. / +30°C max.

**Substrate Humidity** ≤ 4% pbw moisture content.  
Test method: Sika-Tramex meter or CM-measurement.  
No rising moisture according to ASTM (Polyethylene-sheet).

<b>Relative Air Humidity</b>	80% r.h. max.
<b>Dew Point</b>	Beware of condensation! The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish.

## Application Instructions

<b>Mixing</b>	Part A : part B = 85 : 15 (by weight)
<b>Mixing Time</b>	Prior to mixing stir part A mechanically. When all of part B has been added to part A, continuously mix for 3 minutes until a uniform mix has been achieved. To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix. Over mixing must be avoided to minimize air entrainment.
<b>Mixing Tools</b>	<b>Sikafloor®-390</b> must be mechanically mixed using an electric power stirrer (300 - 400 rpm) or other suitable equipment.
<b>Application Method / Tools</b>	<p>Prior to application, confirm substrate moisture content, relative humidity and dew point.</p> <p>If &gt; 4% pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.</p> <p><i>Self-smoothing system (horizontal areas):</i> <b>Sikafloor®-390</b> is poured, spread evenly by means of a serrated trowel. Roll immediately in two directions with a spiked roller to ensure even thickness.</p> <p><i>Self-smoothing system (vertical areas):</i> The first layer of <b>Sikafloor®-390</b>, mixed with 2.5 - 4% pbw Extender T, has to be applied by trowel. After curing, apply the second layer of <b>Sikafloor®-390</b>, mixed with 2.5 - 4% pbw Extender T, by trowel.</p> <p><i>Broadcast system with slip resistance:</i> <b>Sikafloor®-390</b> is poured, spread evenly by means of a serrated trowel then blind the fresh layer with silicon carbide or quartz sand to excess. After final drying the surplus silicon carbide / quartz sand must be removed by brush and the surface must be vacuumed. The seal coat (<b>Sikafloor®-390</b> + 5% pbw Thinner C) has to be applied evenly by short-piled roller or squeegee.</p>
<b>Cleaning of Tools</b>	Clean all tools and application equipment with Thinner C immediately after use. Hardened/cured material can only be mechanically removed.

## Potlife

Temperatures	Time
+10°C	~ 120 minutes
+20°C	~ 60 minutes
+30°C	~ 30 minutes

**Waiting Time / Overcoatability** Before applying **Sikafloor®-390** on Sikafloor®-156 allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	4 days
+20°C	12 hours	2 days
+30°C	6 hours	1 day

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

Substrate temperature	Minimum	Maximum
+10°C	48 hours	72 hours
+20°C	30 hours	48 hours
+30°C	20 hours	30 hours

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

**Notes on Application / Limitations**

Do not apply **Sikafloor®-390** on substrates in which significant vapour pressure may occur.

Do not blind the primer coat.

Freshly applied **Sikafloor®-390** must be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer

*Tools*

Recommended supplier of tools:

PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, [www.polyplan.com](http://www.polyplan.com)

Serrated trowel for smooth wearing layer:

e.g. Large-Surface Scraper No. 565, Toothed blades No. 25

Layer thickness of wearing layer: ~ 1.5 mm.

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

For exact colour matching, ensure the **Sikafloor®-390** in each area is applied from the same control batch numbers.

**Curing Details**

Applied Product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 48 hours	~ 6 days	~ 14 days
+20°C	~ 30 hours	~ 4 days	~ 10 days
+30°C	~ 20 hours	~ 3 days	~ 7 days

Note: Times are approximate and will be affected by changing ambient conditions. For traffic with solid / hard wheeled lift trucks allow 3 weeks curing time.

**Cleaning / Maintenance**

**Methods**

To maintain the appearance of the floor after application, **Sikafloor®-390** 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.

**Notes**

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 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.

## Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

## EU Regulation 2004/42 VOC - Decopaint Directive

According to the EU-Directive 2004/42, the maximum allowed content of VOC Product category IIA / j Type **sb**) is 550 / 500 g/l (Limits 2007 / 2010), for the ready to use product.

The maximum content of **Sikafloor®-390** 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 should 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 Gulf B.S.C (c)**  
Bldg. 925, Road 115, Sitra Area 601  
P.O. Box 15776  
Adliya, Kingdom of Bahrain  
TEL.:+973 17738 188  
Fax:+973 17732 476  
E-mail:sika.gulf@bh.sika.com  
Web: <http://www.sika.com.bh>

