

# Sikafloor®-400 N Elastic

## 1-Part PUR Highly Elastic Coating

Construction

**Product Description** Sikafloor®-400 N Elastic is a one-part, highly elastic, solvent containing, UV resistant, coloured, moisture curing polyurethane resin coating.

**Uses**

- Smooth or slip resistant, UV resistant, waterproof, crack bridging coating for concrete and cementitious screed substrates
- For light to medium mechanical exposure
- For balconies, terraces, footbridges, stairways etc.
- As the top coat in the Sika Ground Water Protection System (I N) for Bund Containment Areas

**Characteristics / Advantages**

- Highly elastic
- Crack bridging
- Waterproof
- UV resistant, non-yellowing
- Weather resistant
- Abrasion resistant with normal use
- Slip resistant surfaces are possible

### Tests

**Approval / Standards** Approval for "Ground Water Protection System", Z-59.12-4, DIBt, Germany, Jun. 2003.

### Product Data

**Form** Liquid

**Appearance / Colours** Almost unlimited choice of RAL colour shades.

**Packaging** 6 kg, 18 kg units

### Storage

**Storage Conditions / Shelf Life** 6 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** Polyurethane

**Density (at +23°C)** ~ 1.6 kg/lit (DIN EN ISO 2811-1)

**Solid Content** ~ 77% (by volume) / ~ 88% (by weight)



## Mechanical / Physical Properties

**Elongation at Break** At +23°C: ~ 320% (7days /+23°C) (DIN 53504)  
At -20°C: ~ 70% (7days / +23°C)

**Abrasion Resistance** 30 mg (CS 10/1000/1000) (8 days / +23°C) (DIN 53 109 (Taber Abrader Test))

## Resistance

**Chemical Resistance** Resistant against many chemicals. Please ask for a detailed chemical resistance table.  
Attention: Wine, coffee, some leaves and flower petals etc. may cause surface discolouration but this will have no effect on the product performance and durability.

## Thermal Resistance

*Exposure	Dry heat
Permanent	+50°C
Short-term max. 7 days	+80°C
Short-term max. 8 hours	+100°C

.No simultaneous chemical and mechanical exposure\*

## System Information

### System Structure

*System for light wear (layer thickness: 0.3 - 0.5 mm):*

Primer: 1 x **Sikafloor®-400 N Elastic** diluted with 10% pbw Sika Thinner C  
Seal Coat: 1 x **Sikafloor®-400 N Elastic**

*System for medium wear (layer thickness: 0.7 - 1.2 mm):*

Primer: 1 x Sikafloor®-156  
Coating: 1 x **Sikafloor®-400 N Elastic**

*System for medium wear + Surface Design (layer thickness: 0.9 - 1.4 mm):*

Primer: 1 x Sikafloor®-156  
Coating: 1 x **Sikafloor®-400 N Elastic** lightly broadcast with coloured chips  
Matt seal coat: 1 x Sikafloor®-410

*System for high wear (layer thickness: 1.5 - 2.0 mm):*

Primer: 1 x Sikafloor®-156 broadcast to excess with quartz sand 0.3 - 0.8 mm  
Seal coat: 1 x **Sikafloor®-400 N Elastic**

*System for high wear + Surface Design (layer thickness: 1.5 - 2.0 mm):*

Primer: 1 x Sikafloor®-156  
Coating: 1 x **Sikafloor®-400 N Elastic**, broadcast to excess with coloured quartz sand 0.3 - 0.8 mm;  
Matt seal coat: 1 x Sikafloor®-410

*Coving / Skirtings (> 4% slope):*

Coating: **Sikafloor®-400 N Elastic** + 1.5 - 2% pbw Extender T

*Top coat of the Sika® Ground Water Protection System*

(similar to certified system I N)(layer thickness: ~1.0 mm):

Primer: 1 x Sikafloor®-156  
Coating: 1 x **Sikafloor®-400 N Elastic**

Note: The system configurations as described must be fully complied with and may not be changed.

## Application Details

### Consumption / Dosage

Coating System	Product	Consumption
Primer	<b>Sikafloor®-400 N Elastic</b> + 10% pbw Thinner C	0.4 - 0.6 kg/m <sup>2</sup>
<i>Seal coat for light wear</i> Seal coat:	<b>Sikafloor®-400 N Elastic</b>	0.4 - 0.8 kg/m <sup>2</sup>
<i>System for medium wear</i> Coating:	<b>Sikafloor®-400 N Elastic</b>	0.9 - 1.5 kg/m <sup>2</sup>
<i>System for medium wear + Surface design</i> Coating:	<b>Sikafloor®-400 N Elastic</b> + colour chips	0.9 - 1.5 kg/m <sup>2</sup> 0.03 - 0.07 kg/m <sup>2</sup>
Matt seal coat:	Sikafloor®-410	~ 0.15 kg/m <sup>2</sup>
<i>System for high wear</i> Primer:	Sikafloor®-156 Broadcast with quart sand 0.3 – 0.8 mm	0.4 - 0.6 kg/m <sup>2</sup> 4 - 6 kg/m <sup>2</sup>
Seal coat:	<b>Sikafloor®-400 N Elastic</b>	0.9 - 1.5 kg/m <sup>2</sup>
<i>System for high wear + Surface design</i> Primer:	Sikafloor®-156	0.3 - 0.5 kg/m <sup>2</sup>
Coating:	<b>Sikafloor®-400 N Elastic</b> , broadcast with coloured quart sand 0.3 - 0.8 mm	0.9 - 1.5 kg/m <sup>2</sup> 0.4 - 0.6 kg/m <sup>2</sup>
Matt seal coat:	Sikafloor®-410	~ 0.25 kg/m <sup>2</sup>
<i>System for Ground Water Protection</i> Coating:	<b>Sikafloor®-400 N Elastic</b>	0.9 - 1.5 kg/m <sup>2</sup>
<i>UV-protection on Sikalastic- membranes (no roofs)</i> Seal coat:	<b>Sikafloor®-400 N Elastic</b>	0.4 - 0.8 kg/m <sup>2</sup>
Coving / Skirtings (> 4% slope)	<b>Sikafloor®-400 N Elastic</b> + 1.5 - 2.0% pbw Extender T	1.0 - 1.2 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.

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.

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## Application Conditions / Limitations

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

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

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

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**Relative Air Humidity** 80% r.h. max.  
35% min. (below +20°C: 45% min.)

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**Dew Point** 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.

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## Application Instructions

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**Mixing Time** Prior to use stir **Sikafloor®-400 N Elastic** mechanically for 3 minutes.  
If required the Thinner C or Extender T should be added into the **Sikafloor®-400 N Elastic** until a uniform mix has been achieved.  
Over mixing must be avoided to minimize air entrainment.

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**Mixing Tools** **Sikafloor®-400 N Elastic** must be mechanically mixed using an electric power stirrer (300 - 400 rpm) or other suitable equipment.

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**Application Method / Tools** Prior to application, confirm substrate moisture content, r.h. and dew point.  
If > 4% pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.  
*Primer:*  
Ensure that a continuous, pore free coat covers the substrate. If necessary, apply two priming coats. Apply Sikafloor®-156 or **Sikafloor®-400 N Elastic** with 10% pbw Thinner C by brush, roller or squeegee.  
*Coating:*  
**Sikafloor®-400 N Elastic** is poured and spread evenly with a trowel.

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**Cleaning of Tools** Clean all tools and application equipment with Thinner C immediately after use.  
Hardened / cured material can only be mechanically removed.

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**Potlife** The material in opened containers should be applied immediately. With open containers surface film formation will happen within 1-2 hours.  
High temperatures and high air humidity will accelerate curing significantly.

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**Waiting Time /  
Overcoatability**

Before applying **Sikafloor®-400 N Elastic** on Sikafloor®-156 allow:

Substrate temperature	Minimum	Maximum
+10°C	36 hours	6 days
+20°C	24 hours	4 days
+30°C	12 hours	2 days

Before applying **Sikafloor®-400 N Elastic** on **Sikafloor®-400 N Elastic** allow:

Substrate temperature	Minimum	Maximum
+10°C	36 hours	1) After thorough cleaning <b>Sikafloor®-400NElastic</b> can be overworked with itself at any time
+20°C	24 hours	
+30°C	16 hours	

<sup>1)</sup> Assuming that all dirt has been removed and contamination is avoided.

Before applying **Sikafloor®-400 N Elastic** on Sikalastic®-821 or -821 LV allow:

Substrate temperature	Minimum	Maximum
+10°C	90 minutes	2) 1 month
+20°C	60 minutes	
+30°C	30 minutes	
+45°C	20 minutes	

<sup>2)</sup> If the maximum waiting time is exceeded then Sikalastic-810 + 15% Thinner C must be applied as a bonding bridge.

Before applying Sikafloor®-410 on **Sikafloor®-400 N Elastic** allow:

Substrate temperature	Minimum	Maximum
+10°C	36 hours	5 days
+20°C	24 hours	3 days
+30°C	16 hours	2 days

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

**Notes on Application  
/ Limitations**

Do not apply **Sikafloor®-400 N Elastic** on substrates in which significant vapour pressure may occur.

Freshly applied **Sikafloor®-400 N Elastic** must be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

Prior to over coating with **Sikafloor®-400 N Elastic**, the priming coats must have cured tack-free.

Do not use for interior applications.

Always apply during falling temperatures. If applied during rising temperatures "pin holing" may occur from rising air.

**Tools**

Recommended Supplier of Tools:

PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, www.polyplan.com.

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

For exact colour matching, ensure the **Sikafloor®-400 N Elastic** in each area is applied from the same control batch numbers.

## Curing Details

Applied Product ready for use

Temperature (r.h. 50%)	Rain resistant	Foot traffic	Full cure
+10°C	~ 15 hours	~ 1 - 2 days*	~ 7 - 14 days*
+20°C	~ 5 hours	~ 6 - 24 hours*	~ 5 - 9 days*
+30°C	~ 3 hours	~ 4 - 18 hours*	~ 3 - 5 days*

\*Strongly influenced by layer thickness

Note: Times are approximate and will be affected by changing ambient conditions.

### 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 / I Type **sb** is 600 / 500 g/l (Limits 2007 / 2010), for the ready to use product.

The maximum content of **Sikafloor®-400 N Elastic** 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



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