

Product Data Sheet
 Edition 06/08/2012
 Identification no:
 02 08 01 03 011 0 000001
 Sikafloor®-406
 (Decothane Clearglaze Quartz)



(Template for local translation, only for internal use)

Sikafloor®-406

(Decothane Clearglaze Quartz)

1-part PUR elastic binder

Product Description	Sikafloor®-406 is a one part, clear aliphatic, solvent containing, UV resistant, moisture triggered curing polyurethane resin binder
Uses	<ul style="list-style-type: none"> ■ Sikafloor®-406 used as binder for the "Quartz finish" of the Sika® Balcony Premium System ■ For medium to high mechanical exposure ■ For balconies, terraces, footbridges, stairways, galleries etc.
Characteristics / Advantages	<ul style="list-style-type: none"> ■ Moisture triggered ■ Water vapour permeable ■ UV resistant, non-yellowing ■ Weather resistant ■ Abrasion resistant with normal use ■ Slip resistant ■ Excellent adhesion
Tests	
Approval / Standards	European Technical Approval No ETA 11/0088, Sikafloor®-405
Product Data	
Form	
Appearance / Colours	transparent liquid
Packaging	1 litre (1 kg) and 5 litres (5 kg)
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 0°C and +25°C. Higher temperatures reduce the shelf life.



Technical Data

Chemical Base	aliphatic polyurethane	
Density	~ 1 kg/l Density value at +23°C.	(EN ISO 2811-1)
Solid Content	~ 59.7% (by volume) / ~ 61.72% (by weight)	(EN ISO 3251)
Flash Point	~ 61°C	(EN ISO 3679)

Mechanical / Physical Properties

Tensile Strength	~ 27 N/mm ²	(EN ISO 527-1/EN ISO 527-3)
Elongation at Break	~ 210%	(EN ISO 527-1/EN ISO 527-3)

Resistance

Chemical Resistance	Resistant to standard 10% solutions of mineral acids, most alkalis, acid rain and detergents. Some oils and solvents may soften the surface. Salt spray to BS 3900 Part 4, ASTM B117 and ASTM G85-94 (Annex A5) - 500hrs. No rusting, blistering or delamination.
----------------------------	---

System Information

System Structure	<p>Sika® Balcony Premium System</p> <p>Primer: 1 x Sika® Bonding Primer</p> <p>Waterproofing:</p> <p>First coat: 1 x Sikafloor®-405 Membran: Sika® Reemat Premium Second coat: 1 x Sikafloor®-405</p> <p>The waterproofing system build up must always be overcoated with the following finishing system chosen according to the mechanical resistance and the aesthetical aspect</p> <p>Finish :Quartz:</p> <p>Primer: Sikafloor®-406 Wear course: Screed made of Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 – 1.2 mm) applied fresh in fresh. Top Coat: 1 x Sikafloor®-416</p>
-------------------------	--



Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sika® Bonding Primer	~ 0.15 l/m ² (~0.15kg/m ²)

Waterproofing

First coat	Sikafloor®-405	min. 1.1 l/m ² (~1.43kg/m ²)
Membran	Sika® Reemat Premium	Has to embed fully in the wet first coat.
Second coat:	Sikafloor®-405	min. 0.5 l/m ² (~0.65kg/m ²)

High mechanical resistance multi colour finish

Primer	Sikafloor®-406	max. 0.1 l/m ² (~0.1kg/m ²)
Wear Course	0.75 l Sikafloor®-406 and 5 kg Sikafloor®-Quartz Sand KG 7, e.g. Graffito (0,6-1,2 mm) applied fresh in fresh.	~ 5.75 kg/m ² ; 3 mm thickness
Top Coat:	1 x Sikafloor®-416	~ 0.2 l/m ² (~0.21kg/m ²)

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 priming metal parts on a balcony please use SikaCor EG-Phosphat or SikaCor EG-Phosphat Rapid.

Substrate Quality

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².

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

Old coating and tiles have to be solid, adherent and free of layers detrimental to adhesion. Existing layer has to be cleaned and mechanically roughened. A test area has to be applied.

Substrate Preparation

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

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

Repairs to the substrate, filling of blowholes/voids and surface levelling must 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 in order to achieve an even surface.

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

Solid and good adherent tiles must be grinded and then levelled with a scratch coat of Sikafloor®-156 / -161 before applying the chosen Sika Balcony System.

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	+2°C min. / +30°C max. Frozen substrates must defrost for 24 hours.
Ambient Temperature	+2°C min. / +30°C max.
Substrate Moisture Content	Visible damp free (maximum 18% wood moisture equivalent). < 6% pbw moisture content Test method: Sika®-Tramex meter, < 4% CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene sheet).
Relative Air Humidity	80% r.h. max. 35% min. (below +20°C: 45% min.)
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.

Application Instructions

Mixing Time	Mix Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 – 1.2 mm) with a low speed electric stirrer for 2 min to receive a homogeneous mix. The mixing ratio is 0.75 l Sikafloor®-406 and 5 kg Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 -1.2 mm).
Mixing Tools	Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 – 1.2 mm) must be mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.
Application Method / Tools	<p>Prior to application, confirm substrate moisture content, r.h. and dew point.</p> <p><i>Primer:</i> Apply Sikafloor®-406 by brush or roller with a consumption of max. 0.1 l/m². Be sure that the primer is still wet before applying the mix of Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 – 1.2 mm). The best is to prime in 0.5 m width sections so the primer will always still be wet when applying the mortar.</p> <p><i>Wear course:</i> Pour out the mix of Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0.6 - 1.2 mm) on the wet with Sikafloor®-406 primed surface Spread the mix evenly with a steel trowel while compacting it, to achieve a closed surface with a 3 mm layer thickness. The trowel has to be continuous cleaned with Thinner C to avoid sticking mortar. Note: "do not attempt to create a slope with the quartz mortar." (a new slope must be created before applying the waterproofing system).</p> <p><i>Top Coat:</i> Use a short pile roller. Pour the mixed Sikafloor®-416 into a paint tray or scuttle with a paint grid to ensure the wetting out of the roller. Under no circumstances should the material be poured directly onto the substrate and then rolled out. Roll in straight lines to ensure an even coverage. If practical, cross rolling is advantageous to create an even coverage.</p>
Cleaning of Tools	Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically.



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.

Waiting Time / Overcoating Before applying Sikafloor®-406 on Sikafloor®-405 allow:

Substrate temperature	Minimum	Maximum
+5°C	24 hours	7 days
+20°C	18 hours	5 days
+30°C	12 hours	3 days

Before applying Sikafloor®-416 on the coloured quartz screed allow:
At approximately 20°C/50% R.H., through cure at a minimum of 8 hours.
At approximately 2°C, through cure at 24 hours.
Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Notes on Application / Limitations Prior to overcoating Sikafloor®-405 with Sikafloor®-406, the waterproofing system must have cured tack-free.
The mix of Sikafloor®-406 and Sikafloor®-Quartz Sand KG 7, e.g Graffito (0,6-1,2 mm) has to be applied fresh in fresh with the primer coat of Sikafloor®-406 Do not use for interior applications.
Always apply during falling temperatures. If applied during rising temperatures “pin holing” may occur from rising air.
If this is not possible and the substrate seems to be outgasing the use of Sika® Concrete Primer is necessary. Please refer to the Product Data Sheet of Sika® Concrete Primer.
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®-406 in each area is applied from the same control batch numbers.
If heating is required do not use gas, oil, paraffin or other fossil fuel heaters, these produce large quantities of both CO₂ and H₂O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.

Curing Details

Applied Product ready for use At approximately 20°C/50% R.H., touch dry at 6 to 7 hours; through cure at a minimum of 8 hours.
At approximately 2°C, through cure at 24 hours.
Note: Times are approximate and will be affected by changing ambient conditions and the layer thickness.




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 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 shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.
Legal Notes	<p>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.</p> <p>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.</p>



Note

The following chapter is only mandatory for European countries.

CE Labelling

	
Sika Services AG Tüffenwies 16 CH-8048 Zurich Switzerland 3203	
Sikafloor®-405 Liquid applied roof waterproofing system on the basis of polyurethane for use on roofs, terraces and balconies ¹	
Last two digits of the year in which the marking was affixed	09
European Technical approval No.	ETA 11/0088
Guideline for European Technical approval	ETAG-005-6
Minimum layer thickness of the waterproofing layer	1.4 mm
Thickness achieved with	Sika® Reemat Premium
Level of use categories according to ETAG 005 with relation to:	
External fire performance	Class B _{ROOF(t1)}
Reaction to fire EN 13501-1	class F
Working life:	W3
Climatic zones:	M
All finish layers in combination with all substrates:	P4
Lowest surface temperature	TL3
Highest surface temperature	TH3
Roof slope:	S1 to S4
Statement of dangerous substances	None contained
Slipperiness	NPD
Water vapour permeability (μ)	2500
Resistance to wind load	≥ 50kPa

¹⁾ The waterproofing layer is tested and should be covered by one of the following finishes.

- Finish: Quartz** (min thickness ~3000 μm)
- Finish: Deco +** (min thickness ~275 μm)
- Finish: Deco** (min thickness ~275 μm)
- Other finishes: tiles, timber boards and pavers on bearing pads.**

EU Regulation 2004/42

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

VOC - Decopaint Directive

The maximum content of **Sikafloor®-406** is < 500 g/l VOC for the ready to use product.



Sika Services AG
Tüffenwies 16
CH-8048 Zurich
Switzerland

Phone +41 44 436 40 40
Telefax +41 44 436 46 86
www.sika.com

