Construction

Sikafloor®-300 N

2-part PUR elastic, low VOC, self-smoothing comfort floor

Product Description

Sikafloor®-300 N is a two part, solvent free, low VOC emission certified, elastic, self-smoothing, PUR resin.

Uses

- Elastic smooth wearing course for concrete and other cement based substrates
- For decorative floor finishes
- Particularly suitable for hospitals, schools, sales premises, showrooms, entrance halls, lobbies, open-plan offices, museums
- For interior use only

Characteristics / Advantages

- Very low VOC emission
- Solvent free
- Permanently elastic (crack bridging)
- Good mechanical resistance
- Very high yellowing resistance
- Reduces footfall sound
- Decorative designs possible using coloured chippings etc.
- Easy to apply
- Low maintenance finish

Test

Approval / Standards

Fire classification in the radiant panel apparatus and smoke rating: Report No. 411132, EMPA, Switzerland, March 2000.

Certificate of conformity for harmful substances. Report-No. SG 140 01/I, LGA,. Germany, July 2003.

Product Data

Form

Appearance / Colours

Resin - part A: coloured, liquid
Hardener - part B: transparent, liquid

Almost unlimited choice of colour shades.

Note: With bright colour shades such as yellow or orange etc., colour variations may occur due to the filling with quartz sand.

Packaging	Part A:	13.9 kg containers
	Part B:	6.1 kg containers
	Part A+B:	20.0 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	PUR		
Density	Part A:	~ 1.54 kg/l	
	Part B:	~ 1.16 kg/l	(DIN EN ISO 2811-1)
	Mixed Resin (unfilled):	~ 1.40 kg/l	
	Mixed Resin (filled 1 : 0.4):	~ 1.48 kg/l	
	All Density values at +23 °C.		
Solid Content	~ 100% (by volume) / ~ 100% (by weight)		

Mechanical / Physical Properties

Tensile Strength	Resin: ~ 11.0 N/mm² (14 days / +23 °C)	(DIN 53504)
Bond Strength	> 1.5 N/mm^2 (failure in concrete)	(EN 13892-8)
Shore A Hardness	Resin: ~ 85 (14 days / +23 °C)	(DIN 53505)
Elongation at Break	Resin: ~ 90% (14 days / +23 °C)	(DIN 53504)
Tear Growth Strength	Resin: ~ 31 N/mm (14 days / +23 °C)	(ISO 34-1)
Thermal Conductivity	λ = 0.28 W/mK	(DIN 52612)
Impact Sound Insulation	ΔL_w = 3 db	(EN ISO 140-8 / EN ISO 712-2)

Resistance

Chemical Resistance

Sikafloor®-300 N always has to be sealed with Sikafloor®-302 W.
Therefore, refer to chemical resistance chart of Sikafloor®-302 W.

Thermal Resistance

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

*No simultaneous chemical and mechanical exposure.

System Information

System Structure

Self-smoothing coating ~ 2.0 mm:

Primer:	1 x Sikafloor®-156
Wearing course:	1 x Sikafloor®-300 N + quartz sand 0.08 - 0.25 mm (e.g. Sikadur®-504)* + Sikafloor® Colourchips < 3 mm (optional)
Seal coat (mandatory):	1 x Sikafloor®-302 W New

*The addition of quartz sand is limited, the upper limits are dependent on the temperature (see application details)

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-156	0.3 - 0.5 kg/m²
Levelling (if required)	Sikafloor®-156 levelling mortar	Refer to PDS of Sikafloor®-156
Self-smoothing wearing course (film thickness ~ 2.0 mm)	Sikafloor®-300 N unfilled Sikafloor®-300 N filled with quartz sand 10 - 15°C: binder : sand=1 : 0.3 15 - 25°C: binder : sand=1 : 0.4 25 - 30°C: binder : sand=1 : 0.5 optional: Sikafloor® Colourchips < 3 mm	2.60 kg/m² 3.00 kg/m² (Binder + sand) 2.31 kg/m² + 0.69 kg/m² 2.14 kg/m² + 0.86 kg/m² 2.00 kg/m² + 1.00 kg/m² 0.02 - 0.04 kg/m²
Seal coat	Sikafloor®-302 W New	0.15 kg/m²

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

Substrate Quality

Concrete substrates must be sound and of sufficient compressive strength (minimum 25 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2.

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 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.

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 Moisture Content

≤ 4% pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet).

Relative Air Humidity

80% r.h. max.

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

Part A : part B = 70 : 30 (by weight)

Mixing Time

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 2 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, add the quartz sand and 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 consistent mix.

Over mixing must be avoided to minimise air entrainment.

Mixing Tools

Sikafloor®-300 N must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

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.

Levelling:
Rough surfaces need to be levelled first. Therefore use e.g. Sikafloor®-156 levelling mortar (see PDS).

Self-smoothing system 2.0 mm:
Sikafloor®-300 N is poured and spread evenly by means of a serrated trowel. Roll immediately in two directions with a spiked roller to ensure even thickness and to remove entrapped air. If desired broadcast slightly and evenly with Sikafloor® Colourchips.

Once Sikafloor®-300 N is “tack-free” apply the seal coat.

Seal coat:
Top coats are uniformly spread using a short pile nylon roller.

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 and/or cured material can only be removed mechanically.

Potlife

Temperatures	Time
+10 °C	~ 60 minutes
+20 °C	~ 30 minutes
+30 °C	~ 15 minutes

Waiting Time / Overcoating

Before applying Sikafloor®-300 N on Sikafloor®-156 allow:

Substrate temperature	Minimum	Maximum
+10 °C	24 hours	3 days
+20 °C	12 hours	2 days
+30 °C	6 hours	1 day

Before applying Sikafloor®-302 W New on Sikafloor®-300 N allow:

Substrate temperature	Minimum	Maximum
+10 °C	48 hours	72 hours
+20 °C	30 hours	48 hours
+30 °C	20 hours	36 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®-300 N on substrates with rising moisture.

Do not apply on substrate surfaces with a slope > 1%.

Do not blind the primer coat

Freshly applied Sikafloor®-300 N must be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

Uncured material reacts in contact with water (foaming). During application care must be taken that no sweat drops into fresh Sikafloor®-300 N (wear head and wrist bands)

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

For exact colour matching, ensure the Sikafloor®-300 N in each area is applied from the same control batch number.

Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading, may lead to imprints in the resin.

If 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.

Curing Details

Applied Product ready for use

Temperature	Foot traffic	Full cure
+10℃	~ 48 hours	~ 10 days
+20℃	~ 30 hours	~ 7 days
+30℃	~ 20 hours	~ 5 days

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

Cleaning / Maintenance

Methods

To maintain the appearance of the floor after application, Sikafloor®-300 N must have all spillages removed immediately and be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc using suitable detergents and waxes.

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 should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

Construction

CE Labelling

The harmonized European Standard EN 13 813 „Screed material and floor screeds - Screed materials - Properties and requirements“ specifies requirements for screed materials for use in floor construction internally.

Structural screeds or coatings, i.e. those that contribute to the load bearing capacity of the structure, are excluded from this standard.

Resin floor systems as well as cementitious screeds fall under this specification. They have to be CE-labelled as per Annex ZA. 3, Table ZA.1.5 and 3.3 and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

CE	
Sika Limited Watchmead Welwyn Garden City Hertfordshire AL7 1BQ United Kingdom	
04 [1)]	
EN 13813 SR-B1,5-AR1-IR 4	
Resin screed/coating for indoors in buildings (systems as per Product Data Sheet)	
Reaction to fire:	E_{fl} [2)]
Release of corrosive substances (**S**ynthetic **R**esin Screed):	SR
Water permeability:	NPD [2)]
Abrasion **R**esistance:	AR1 [4)]
Bond strength:	B 1,5
Impact **R**esistance:	IR 4
Sound insulation:	NPD
Sound absorption:	NPD
Thermal resistance:	NPD
Chemical resistance:	NPD

[1)] Last two digits of the year in which the marking was affixed.

[2)] In Germany, DIN 4102 still applies. Passed class B2.

[3)] No performance determined.

[4)] Not broadcast with sand.

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®-300 N** is < 500 g/l VOC for the ready to use product.

Sika Limited
Watchmead
Welwyn Garden City
Hertfordshire
AL7 1BQ
United Kingdom

Phone +44 1707 394444
Telefax +44 1707 329129
www.sika.co.uk, email: sales@uk.sika.com

ISO 14001 ISO 9001