

Product Data Sheet
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Sikafloor®-359 N



EN 13813
EN 1504-2

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0921- CPD - 2017

Sikafloor®-359 N

2-part PUR tough-elastic coloured seal coat

Product Description

Sikafloor®-359 N is a two part tough-elastic, coloured, non-yellowing, polyurethane seal coat.

Uses

- Abrasion resistant seal coat with high mechanical resistance for broadcast systems with crack-bridging properties in industrial flooring
- Particularly suitable for car park decks, ramps and warehouses etc.

Characteristics / Advantages

- Tough-elastic
- Good mechanical and chemical resistance
- Watertight
- Good opacity
- Non-yellowing
- Matt finish
- Easy application
- Slip resistant surface possible

Test

Approval / Standards

Conforms to the German Standard DafStb Rili-SIB 2001 OS 11a, Report-No. P 4703-2, Polymer Institute, Germany, February 2007.

Conforms to the German Standard DafStb Rili-SIB 2001 OS 11b, Report-No. P 4704, Polymer Institute, Germany, February 2007.

Conforms to the requirements of German Standard BGR 181 and DIN 51130 for Class R11/V4, R12/V6 and R12/V10 (Skid/Slip resistance), Report-No. 12 4274-S/06, 12 4271-S/06 and 12 4272-S/06 MPI, Germany, December 2006.

Fire classification in accordance with EN 13501-1, Report-No. 2007-B-0181/1.9 and 2007-B-0181/13, MPA Dresden, Germany, May 2007.

Product Data

Form

Appearance / Colours

Resin - part A: coloured, liquid
Hardener - part B: transparent, liquid
Almost unlimited choice of colour shades.

Packaging

Part A: 25.35 kg containers
Part B: 7.15 kg containers
Part A+B: 32.5 kg ready to mix units

Construction



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 Polyurethane

Density Part A: ~ 1.67 kg/l
Part B: ~ 1.05 kg/l (DIN EN ISO 2811-1)
Mixed resin: ~ 1.45 kg/l
All Density values at +20°C.

Solid Content ~ 85% (by volume) / ~ 85% (by weight)

Mechanical / Physical Properties

Bond Strength > 1.5 N/mm² (ISO 4624)

Shore D Hardness 52 (7 days / +23°C) (DIN 53 505)

Abrasion Resistance 160 mg (CS 10/1000/1000) (7 days / +23°C) (DIN 53 109 (Taber Abrader Test))

Resistance

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

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C
Short-term max. 7 d	+80°C
Short-term max. 4 h	+100°C

Short-term moist/wet heat* up to +80°C where exposure is only occasional (high pressure water jetting etc.)

*No simultaneous chemical and mechanical exposure.

System Information

System Structure

Sealing of EP/PUR broadcast systems:

Primer: 1 x Sikafloor®-156 / -161 lightly broadcast with quartz sand (0.3 - 0.8 mm)
Base coat: 1 x Sikafloor®-261 / 325 + quartz sand
Broadcasting: Broadcast to excess with quartz sand 0.3 - 0.8 mm or 0.7 - 1.2 mm
Seal coat: 1 x Sikafloor®-359 N

Car park decking systems (according to the German Standard DAfStb Rili-SIB 2001):

Classification OS 11a

Primer: 1 x Sikafloor®-156 / -161 lightly broadcast with quartz sand (0.3 - 0.8 mm)
Base coat: 1 x Sikafloor®-350 N
Wearing course: 1 x Sikafloor®-355 N (filled with 20% quartz sand 0.1-0.3 mm)
Broadcasting: Broadcast to excess with quartz sand 0.3 - 0.8 mm or 0.7 - 1.2 mm
Seal coat: 1 x Sikafloor®-359 N

Classification OS 11b

Primer: 1 x Sikafloor®-156 / -161 lightly broadcast with quartz sand (0.3 - 0.8 mm)
Wearing course: 1 x Sikafloor®-350 N (filled with 20% quartz sand 0.1-0.3 mm)
Broadcasting: Broadcast to excess with quartz sand 0.3 - 0.8 mm or 0.7 - 1.2 mm
Seal coat: 1 x Sikafloor®-359 N

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Seal coat for EP / PUR broadcast systems Quartz sand 0.3 - 0.8 mm Quartz sand 0.7 - 1.2 mm	Sikafloor®-359 N	~ 0.7 - 0.9 kg/m ²

Car park decking systems (according to the German Standard DAfStb Rili-SIB 2001):

Classification OS 11a

Coating System	Product	Consumption
Primer (lightly blinded)	Sikafloor®-156 / -161 Quartz sand 0.3 - 0.8 mm	0.3 - 0.5 kg/m ² ~ 0.8 kg/m ²
Base coat	Sikafloor®-350 N Elastic	~ 2.0 kg/m ²
Wearing course	Sikafloor®-355 N filled Broadcast in excess with Quartz sand 0.3 - 0.8 mm or 0.7 - 1.2 mm	~ 1.86 kg/m ² (1.55 kg/m ² binder + 0.31 kg/m ² quartz sand 0.1-0.3 mm) 6 - 8 kg/m ²
Seal coat	Sikafloor®-359 N	0.7 - 0.9 kg/m ²

Classification OS 11b

Coating System	Product	Consumption
Primer (lightly blinded)	Sikafloor®-156 / -161 Quartz sand 0.3- 0.8 mm	0.3 - 0.5 kg/m ² ~ 0.7 kg/m ²
Wearing course	Sikafloor®-350 N filled Broadcast in excess with Quartz sand 0.3 - 0.8 mm or 0.7 - 1.2 mm	~ 2.40 kg/m ² (2.00 kg/ m ² binder + 0.40 kg/ m ² quartz sand 0.1-0.3 mm) 6 - 8 kg/m ²
Seal coat	Sikafloor®-359 N	~ 0.7 - 0.9 kg/m ²

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

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.

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 = 78 : 22 (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 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 minimise air entrainment.
Mixing Tools	Sikafloor®-359 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. <i>Seal coat:</i> Sealer coats can be applied by squeegee and then back-rolled (crosswise) with a short-piled roller.
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	~ 40 minutes
+20°C	~ 25 minutes
+30°C	~ 15 minutes

**Waiting Time /
Overcoating**

Before applying Sikafloor®-359 N on Sikafloor®-350 N broadcast allow:

Substrate temperature	Minimum	Maximum
+10 °C	24 hours	*
+20 °C	15 hours	*
+30 °C	8 hours	*

Before applying Sikafloor®-359 N on Sikafloor®-355 N broadcast allow:

Substrate temperature	Minimum	Maximum
+10 °C	24 hours	*
+20 °C	10 hours	*
+30 °C	5 hours	*

Before applying Sikafloor®-359 N on Sikafloor®-325 or -261 broadcast allow:

Substrate temperature	Minimum	Maximum
+10 °C	36 hours	*
+20 °C	24 hours	*
+30 °C	16 hours	*

* No max. waiting time if fully broadcast surface is free from all contaminations.

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

**Notes on Application /
Limitations**

Freshly applied Sikafloor®-359 N must be protected from damp, condensation and water for at least 24 hours.

Sikafloor®-359 N applied at different thicknesses can lead to different degrees of matt finish.

Avoid puddles on the surface with the primer.

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.

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

For exact colour matching, ensure the Sikafloor®-359 N 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	~ 5 days	~ 10 days
+20 °C	~ 24hours	~ 3 days	~ 7 days
+30 °C	~ 16 hours	~ 2 days	~ 3 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®-359 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.

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 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.

CE Labelling

The harmonized European Standard EN 13813 „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):

	
Sika Deutschland GmbH Kornwestheimerstraße 103-107 D - 70439 Stuttgart	
07 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 S creed):	SR
Water permeability:	NPD ²⁾
A brasion R esistance:	AR1 ⁴⁾
B ond strength:	B 1,5
I mpact R esistance:	NPD
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⁾ Min. classification, please refer to the individual test certificate.

³⁾ No performance determined.

⁴⁾ Not broadcast with sand.

CE Labelling

The harmonized European Standard EN 1504-2 „Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 2 : Surface protection systems for concrete” gives specifications for products and systems used as methods for the various principles presented under EN 1504-9.

Products which fall under this specification have to be CE-labelled as per Annex ZA. 1, Tables ZA.1a to ZA 1g according to the scope and relevant clauses there indicated, and fulfil the requirements of the given mandate of the Construction Products Directive (89/106):

Here below indicated are the minimum performance requirements set by the standard. For the specific performance results of the product to the particular tests, please see the actual values above in the PDS.

CE	
0921	
Sika Deutschland GmbH Kornwestheimerstraße 103-107 D - 70439 Stuttgart	
08 ¹⁾	
0921–CPD–2017	
EN 1504-2	
Surface Protection Product Coating ²⁾	
Abrasion resistance (Taber test):	< 3000 mg
Permeability to CO ₂ :	$S_D > 50$ m
Permeability to water vapour:	Class II
Capillary absorption and permeability to water:	$w < 0.1 \text{ kg/m}^2 \times \text{h}^{0.5}$
Resistance to severe chemical attack: ³⁾	Class I
Impact resistance:	Class I
Adhesion strength by pull-off test:	$\geq 2.0 \text{ N/mm}^2$
Fire Classification: ⁴⁾	E _{fl}

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

²⁾ tested as part of system build-up Sikafloor®-161 / Sikafloor®-350 N Elastic / Sikafloor®-359 N.

³⁾ Please refer to the Sikafloor® Chemical Resistance Chart.

⁴⁾ Min. classification, please refer to the individual test certificate.

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®-359** is < 500 g/l VOC for the ready to use product.



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