

Preliminary Product Data Sheet

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Identification no:

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Sikafloor®-269 CR



Sikafloor®-269 CR

2-part low particle and ultra-low VOC/AMC emission self-smoothing epoxy resin system

Construction

Product Description

Sikafloor®-269 CR is a two part, total solid, low particle and ultra-low VOC/AMC emission, self-smoothing epoxy resin system designed for cleanroom environments.

"Total solid epoxy composition acc. to the test method Deutsche Bauchemie e.V. (German Association for construction chemicals)"

Uses

- Especially designed for the use in cleanroom environments, where ultra-low VOC/AMC and particle emissions are mandatory, such as optical goods, medical or space industry.
- Also suitable as a hard wearing course for many industries, such as automotive, pharmaceutical, storage facilities and warehouses.

Characteristics / Advantages

- Ultra-low VOC/AMC emissions
- Low particle emissions
- Organo phosphate and phthalate free
- Good chemical and mechanical resistance
- Easy to clean
- Economical
- Liquid proof
- Total solid
- Gloss finish

Test

Approval / Standards

Particle emission certificate Sikafloor-269 CR CSM Statement of Qualification - ISO 14644-1, class 5 - Report No. SI 0908-494 and GMP class A, Report No. SI1008-533.

Outgassing emission certificate Sikafloor-269 CR: CSM Statement of Qualification - ISO 14644-8, class -9.6 - Report No. SI 0908-494.

Very good biological Resistance in accordance with ISO 846, CSM Report No. SI 1008-533

Fire classification in accordance with EN 13501-1, Report-No. 2008-B-3883/04, MPA Dresden, Germany, September 2008

Outgassing Datasheet Sikafloor-269 CR (+90°) M+W Group, 12.4.2007



Product Data

Form

Appearance / Colours	Resin - part A: coloured, liquid Hardener - part B: transparent, liquid RAL 7032, 1001 Other colours on request. Under sun light there will be some discolouration and colour variations; this has no influence on the function and performance of the coating.
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Packaging	Part A: 24,9 kg containers Part B: 5,1 kg containers Part A+B: 30 kg ready to mix units
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Storage

Storage Conditions / Shelf-Life	24 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.
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Technical Data

Chemical Base	Epoxy
Density	Part A: ~ 1.7 kg/l Part B: ~ 1,0 kg/l Mixed resin: ~ 1.5 kg/l All Density values at +23°C (DIN EN ISO 2811-1)
Solid Content	~ 100 % (by volume) / ~ 100 % (by weight)

Mechanical / Physical Properties

Compressive Strength	Resin (filled 1:0.3 with F34*): ~ 85 N/mm ² (7 days / +23°C) (EN 13892-2)
Flexural Strength	Resin (filled 1:0.3 with F34*): ~ 35 N/mm ² (7 days / +23°C) (EN 13892-2)
Bond Strength	> 1.5 N/mm ² (failure in concrete) (ISO 4624)
Shore D Hardness	84 (14 days / +23°C) (DIN 53 505)
Abrasion Resistance	50 mg (CS 10/1000/1000) (14 days / +23°C)(EN ISO 5470-1 (Taber Abraser Test)) *Values have been determined using quartz sand F 34 (0.1-0.3 mm) from Quarzwerke GmbH Frechen sand.

Resistance

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

Exposure*	Dry heat
Short-term max. 7 d	+50°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.

USGBC	Sikafloor®-269 CR conforms to the requirements of LEED
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LEED Rating	EQ Credit 4.2: Low-Emitting Materials: Paints & Coatings SCAQMD Method 304-91 VOC Content < 100 g/l
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System Information			
System Structure	Self-smoothing system: Primer : 1 x Sikafloor®-144/-161 Wearing course: 1 x Sikafloor®-269 CR, filled with quartz sand 0.1 - 0.3 mm 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	Sikafloor®-144/-161	0.3 - 0.5 kg/m ²
	Levelling (optional)	Sikafloor®-161 mortar	Refer to PDS of Sikafloor®-161
	Self-smoothing wearing course (Film thickness ~ 1.5 mm)	Sikafloor®-269 CR filled with quartz sand 0.1 - 0.3 mm (F34*)	Maximum 2.5 kg/m ² Binder + quartz sand Depending on the temperature the filling grade varies from: unfilled (2,5 kg/m ²) 1 : 0.3 pbw (1.9 + 0.6 kg/m ²)
	<p>These figures are theoretical and does not allow for any additional material required due to surface porosity, surface profile, variations in level and wastage etc.</p> <p>*All values have been determined using quartz sand 0.1-0.3 mm from Quarzwerke GmbH Frechen sand. Other quartz sand type will have an effect on the product, such as filling grade, levelling properties and aesthetics.</p> <p>Generally, the lower the temperature the less the filling grade.</p>		
Substrate Quality	<p>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.</p> <p>The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.</p> <p>If in doubt apply a test area first.</p>		
Substrate Preparation	<p>Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.</p> <p>Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.</p> <p>Repairs to the substrate, filling of blowholes/voids and surface levelling can be carried out using appropriate products from the Sikafloor®, SikaDur® and SikaGard® range of materials.</p> <p>The concrete or screed substrate has to be primed or levelled in order to achieve an even surface.</p> <p>High spots must be removed by e.g. grinding.</p> <p>All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.</p>		
Application Conditions / Limitations			
Substrate Temperature	+15 °C min. / +30 °C max.		
Ambient Temperature	+15 °C min. / +30 °C max.		
Substrate Humidity	≤ 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 = 83: 17 (by weight)
Mixing Time	<p>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.</p> <p>When parts A and B have been mixed, add the quartz sand 0.1 - 0.3 mm and mix for a further 2 minutes until a uniform mix has been achieved.</p> <p>To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.</p> <p>Over mixing must be avoided to minimise air entrainment.</p>

Mixing Tools	Sikafloor®-269 CR must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.
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Application Method / Tools	<p>Prior to application, confirm substrate moisture content, r.h. and dew point.</p> <p>If > 4% pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.</p> <p><i>Levelling:</i> Rough surfaces need to be levelled first. Therefore use Sikafloor®-161 levelling mortar (see PDS).</p> <p><i>Wearing course smooth:</i> Sikafloor®-269 CR is poured, spread evenly by means of a serrated trowel.</p> <p>After spreading the material evenly, turn the serrated trowel and smooth the surface in order to achieve an aesthetically higher grade of finish.</p> <p>Roll immediately (within max. 10 minutes of application) in two directions with a steel spiked roller to ensure even thickness and to remove entrapped air. To obtain the highest level of aesthetic finish, spike roll in two directions at a 90 degree angle, passing only once in each direction.</p>
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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.
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Potlife

Temperatures	Time
+15°C	~ 45 minutes
+20°C	~ 30 minutes
+30°C	~ 15 minutes

Waiting Time / Overcoating

Before applying Sikafloor®-269 CR on Sikafloor®-144 allow:

Substrate temperature	Minimum	Maximum
+15°C	26 hours	4 days
+20°C	24 hours	2 days
+30°C	12 hours	1 day

Before applying Sikafloor®-269 CR on Sikafloor®-161 allow:

Substrate temperature	Minimum	Maximum
+15°C	24 hours	3 days
+20°C	12 hours	2 days
+30°C	8 hours	1 day

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

Notes on Application / Limitations

This product may only be used by experienced professionals.

Do not apply Sikafloor®-269 CR on substrates with rising moisture

Do not blind the primer.

Freshly applied Sikafloor®-269 CR 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
Serrated trowel for smooth wearing layer:
e.g. Large-Surface Scrapper No. 565, Toothed blades No. 25
Serrated trowel for textured wearing layer:
e.g. Trowel No. 999 or Adhesive Spreader No.777, Toothed blades No. 23

For exact colour matching, ensure the Sikafloor®-269 CR 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
+15 °C	~ 72 hours	~ 7 days	~ 21 days
+20 °C	~ 48 hours	~ 4 days	~ 7 days
+30 °C	~ 24 hours	~ 2 days	~ 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®-269 CR 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.

Construction

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 500 g/l (Limits 2010) for the ready to use product.

The maximum content of **Sikafloor®-269 CR** is < 500 g/l VOC for the ready to use product.



台灣西卡股份有限公司
33849 桃園縣蘆竹鄉富國路三段 1380 號
TEL :03-352-8622 FAX: 03-352-0470
sika@tw.sika.com / www.sika.com.tw

Sika Services AG
Tüffenwies 16
CH-8048 Zurich
Switzerland

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

