

Product Data Sheet
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Sikafloor®-220 W Conductive

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2-part, electrostatic conductive epoxy primer

Product Description Sikafloor®-220 W Conductive is a two part, water dispersed, epoxy resin with a high electrostatic conductivity.

Uses

- Sikafloor®-220 W Conductive must be applied as conductive primer underneath all Sikafloor® conductive wearing courses, such as Sikafloor®-262 AS N, 262 AS N Thixo, -235 ESD, -266 ECF CR, -269 ECF CR, -381 and -390 ECF.
- Electrostatic conductive coatings on concrete and cementitious screeds for different types of industrial use

Characteristics / Advantages

- Highly electrostatic conductive
- Easy application
- Economical in use

Test

Approval /Standards Water dispersed, epoxy roller coat with a high electrostatic conductivity according to EN 1504-2: 2004 and EN 13813, DoP 02 08 01 02 012 0 000001 2017, certified by Factory Production Control Body No. 0921, certificate 2017, and provided with the CE-mark.

Varnishability test according to VW-standard PV 3.10.7 (paint wetting impairment substances (PWIS)) like silicones, HQM GmbH, Test Report 09-09-132-5, 09.2009

Product Data

Form

Appearance / Colours Resin - part A: black, liquid
Hardener - part B: white, liquid

Packaging Part A: 4.98 kg containers
Part B: 1.02 kg containers
Part A+B: 6 kg unipacks

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. Part A and part B must be protected from frost.

Technical Data

Chemical Base Waterborne epoxy

Density Part A: 1.15 kg/l
Part B: 1.06 kg/l
Mixed Resin: 1.04 kg/l (DIN EN ISO 2811-1)



All density values at +23°C.

Solid Content	~ 34% (by volume) / ~ 44% (by weight)	
Electrostatic Behaviour	Typical average resistance to ground: $R_g \leq 10^4 \Omega$	(DIN EN 1081)
	* Readings may vary, depending on ambient conditions (i.e. temperature, humidity) and measurement equipment.	
USGBC	Sikafloor®-220 W Conductive conforms to the requirements of LEED	
LEED Rating	EQ Credit 4.2: Low-Emitting Materials: Paints & Coatings	
	SCAQMD Method 304-91 VOC Content < 100 g/l	

System Information

System Structure	Primer:	1 x Sikafloor®-156 or Sikafloor®-161
	Earthing connection:	Sika® Earthing Kit
	Conductive primer:	1 x Sikafloor®-220 W Conductive
	Conductive wearing course:	1 x Sikafloor®-262 AS N or AS N Thixo or 1x Sikafloor®-235 ESD or 1x Sikafloor®-266 ECF CR or 1x Sikafloor®-269 ECF CR or 1 x Sikafloor®-381 ECF or 1 x Sikafloor®-390 ECF
	Conductive seal coat:	1 x Sikafloor®-230 ESD TopCoat (optional)
	Note: This system configuration as described must be fully complied with and may not be changed.	

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-156 or Sikafloor®-161	0.3 - 0.5 kg/m ²
Levelling (optional)	Sikafloor®-156 mortar or Sikafloor®-161	Refer to PDS of Sikafloor®-156 or Sikafloor®-161
Conductive primer	Sikafloor®-220 W Conductive	0.08 - 0.10 kg/m ²
Wearing course	Sikafloor®-262 AS N	~ 2.5 kg/m ²
	Sikafloor®-262 AS N Thixo	~ 0.75 kg/m ²
	Sikafloor®-235 ESD	Maximum 2.5 kg/m ²
	Sikafloor®-266 ECF CR	Maximum 2.5 kg/m ²
	Sikafloor®-269 ECF CR	Maximum 2.0 kg/m ²
	Sikafloor®-381 ECF	~ 2.5 kg/m ²
	Sikafloor®-390 ECF	~ 2.5 kg/m ²
Conductive seal coat (optional)	Sikafloor®-230 ESD TopCoat	~ 0.15 kg/m ²

These figures are theoretical and does not allow for any additional material due to 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	<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 must 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>
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Application Conditions / Limitations

Substrate Temperature	+10°C min. / +30°C max.
Ambient Temperature	+10°C min. / +30°C max.
Substrate Moisture Content	<p>< 4% moisture content.</p> <p>Test method: Sika[®]-Tramex meter, CM - measurement or Oven-dry-method.</p> <p>No rising moisture according to ASTM (Polyethylene-sheet).</p>
Relative Air Humidity	75% r.h. max.
Dew Point	<p>Beware of condensation!</p> <p>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.</p>

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>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 minimize air entrainment.</p>
Mixing Tools	Sikafloor [®] -220 W Conductive must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.
Application Method / Tools	Uniformly spread 1 x Sikafloor [®] -220 W Conductive using a short pile nylon roller (12 mm).
Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened and/or cured material can only be removed mechanically.

Pot life

Temperatures	Time
+10°C	~ 120 minutes
+20°C	~ 90 minutes
+30°C	~ 30 minutes

Waiting Time / Overcoating

Before applying Sikafloor[®]-220 W Conductive 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®-235 ESD, 262 AS N, 262 AS N Thixo, 266 ECF CR, 269 ECF CR Sikafloor®-390 ECF or Sikafloor®-381 ECF on Sikafloor®-220 W Conductive allow:

Substrate temperature	Minimum	Maximum
+10°C	26 hours	7 days
+20°C	17 hours	5 days
+30°C	12 hours	4 days

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®-220 W Conductive on substrates with rising moisture.

Apply Sikafloor®-220 W Conductive only on primed or levelled up concrete and screed surfaces.

Do not blind the primer.

Freshly applied Sikafloor®-220 W Conductive should be protected from damp, condensation and water for at least 24 hours.

Only start application of Sikafloor® conductive primer after the primer has dried tack-free all over. Otherwise there is a risk of wrinkling and impairing of the conductive properties.

Tools

Recommended supplier of tools:

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

After the curing of the Sikafloor®-220 W Conductive, testing to measure the conductivity is strongly recommended.

Before the application of a conductive flooring system, a reference area has to be applied. This reference area must be assessed and accepted from the contractor/client. The desired result and method of conductivity measurement must be stated in the Specification and Method Statement. The number of conductivity measurements is strongly recommended to be as shown in the table below:

Ready applied area	Number of measurements
< 10 m ²	6 measurements
< 100 m ²	10-20 measurements
< 1000 m ²	50 measurements
< 5000 m ²	100 measurements

In case of values lower/higher as required, additional measurements has to be carried out, approx. 30 cm around the point with insufficient readings. If the newly measured values are in accordance with the requirements, the total area is acceptable

Placing of earthing points:

Please make sure to only use the original Sikafloor® Earthing Kit in order to connect the earthing points. Every earthing point is able to conduct approx. 300 m²; Ensure the longest distance of each point in the area is max. 10 m to the next earthing point. For longer distances, additional earthing points have to be placed. If site conditions do not allow placing of additional earthing points, longer distances (>10 m) have to be bridged with the help of copper tapes. The earthing points have to be connected to the ring-mains, which has to be carried out and approved by an electrical engineer and in accordance with any relevant regulations or standards.

Numbers of earth connections:

Per room at least 2 earthing points. The optimum number of earth connections depends on the local conditions and should be specified using available drawings.

Recommended measuring equipment for the measuring of the resistance to earth ground: Insulation Tester Metriso 2000 from Warmbier or comparable.

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 - reducing or breaking conductivity.

Curing Details

Applied Product ready for use

Temperature	Foot traffic
+10°C	~ 26 hours
+20°C	~ 13 hours
+30°C	~ 8 hours

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.

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.



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