

Product Data Sheet
Edition 15/08/2006
Identification no:
02 08 01 02 012 0 000001
Sikafloor®-220 W Conductive

Sikafloor®-220 W Conductive

2-part, electrostatically conductive epoxy coating

Product Description	Sikafloor®-220 W Conductive is a two part, water dispersed, epoxy resin with a high electrostatic conductivity.		
Uses	<ul style="list-style-type: none">■ Sikafloor®-220 W Conductive must be applied as conductive layer underneath all Sikafloor® conductive wearing courses, such as Sikafloor®-262 AS, 262 AS Thixo, -381 AS N and -390 AS■ Electrostatically conductive coatings on concrete and cementitious screeds for different types of industrial use		
Characteristics / Advantages	<ul style="list-style-type: none">■ Highly electrostatically conductive■ Easy application■ Economical in use■ Solvent free		
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	(DIN EN ISO 2811-1)
	Part B:	1.06 kg/l	
	Mixed Resin:	1.04 kg/l	
	All density values at +23°C.		
Solid Content	~ 34% (by volume) / ~ 44% (by weight)		
Electrostatic Behaviour	Resistance to earth	$R_E 10^3 - 10^4 \Omega$	(IEC 61340-4-1)



System Information

System Structure	Primer:	1 x Sikafloor®-156
	Earthing connection:	Sika® Earthing Kit
	Conductive coat:	1 x Sikafloor®-220 W Conductive
	Conductive wearing course:	1 x Sikafloor®-262 AS or AS Thixo or 1 x Sikafloor®-381 AS N or 1 x Sikafloor®-390 AS
	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	0.3 - 0.5 kg/m ²
Levelling (optional)	Sikafloor®-156 mortar	Refer to PDS of Sikafloor®-156
Conductive coat	Sikafloor®-220 W Conductive	0.08 - 0.10 kg/m ²
Wearing course	Sikafloor®-262 AS	~ 2.5 kg/m ²
	Sikafloor®-262 AS Thixo	~ 0.75 kg/m ²
	Sikafloor®-381 AS N	~ 2.5 kg/m ²
	Sikafloor®-390 AS	~ 2.5 kg/m ²
Conductive seal coat (optional)	Sikafloor®-230 ESD	~ 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

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% moisture content. Test method: Sika®-Tramex meter, ϕ CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).
Relative Air Humidity	75% 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	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. 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®-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.

Potlife

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®-262 AS, Sikafloor®-262 AS Thixo, Sikafloor®-390 AS or Sikafloor®-381 AS N 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.

Avoid puddles on the surface with the primer.

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

After the curing of the Sikafloor®-220 W Conductive layer, 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:

Applied area	Number of measurements
< 10 m ²	1 measurement / m ²
10 - 100 m ²	10 - 20 measurement
> 100m ²	10 measurements / 100m ²

The measuring points must have a distance of at least 50 cm to the next measuring point. In case of a measurement lower/higher than required, an additional measurement has to be carried out within 50 cm of the point with the insufficient result.

If several measuring points (R_E) of the final floor are $> 1 \cdot 10^6 \Omega$ (in case of electrostatically conductive floorings (ECF)), but the walking test ($< 100 V$, IEC 61340-4-5, IEC 61340-5-1, ESD STM 07.2-1999) and/or the system test ($< 35 M \Omega$, IEC 61340-5-1) results are within the requirements, the total area is acceptable.

Placing of earthing plates:

If the Sikafloor® Earthing Kit conductor system (system of anchored brass-plates with stable earth connection) is applied, the instructions for use have to be followed exactly. Every earthing point is able to conduct 100 m². Ensure the longest distance of each point in the area is max. 10 m to the next earthing point. Clean the earthing spots carefully. For longer distances, additional earthing plates have to be placed. If site conditions do not allow placing of additional earthing points, longer distances ($> 10 m$) have to be bridged with copper tapes. The earthing spots have to be connected to the ring-mains. This work must be executed and approved by an electrical engineer and in accordance with any relevant regulations

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 with documents.

Note: The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking - reducing or breaking conductivity.

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

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 should 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 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	
Primer/sealer (systems as per Product Data Sheet)	
Reaction to fire:	NPD _i ³⁾
Release of corrosive substances (Synthetic Resin Screed):	SR
Water permeability:	NPD
Abrasion Resistance:	NPD
Bond strength:	B 1,5
Impact Resistance:	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⁾ 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 **wb**) is 140 / 140 g/l (Limits 2007 / 2010) for the ready to use product.

The maximum content of **Sikafloor®-220 W** is < 140 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