

PRODUCT DATA SHEET

Sikafloor®-2350 ESD

Electrostatic dissipative epoxy floor coating

DESCRIPTION

Sikafloor®-2350 ESD is a 2-part, electrostatic dissipative, self-smoothing, coloured epoxy coating. It provides a slip-resistant, hard-wearing, seamless, low-maintenance gloss finish.

USES

Sikafloor®-2350 ESD may only be used by experienced professionals.

Sikafloor®-2350 ESD is used as a:

- Smooth roller coat
- Smooth wearing layer
- Seal coat or top coat for slip-resistant broadcast systems

Sikafloor®-2350 ESD is used on the following substrates:

- Concrete and cementitious substrates

Please note:

The Product may only be used for interior applications.

The Product may only be used by experienced professionals.

FEATURES

- Low VOC emissions
- Good resistance to abrasion
- Low odour during application
- Very good mechanical resistance

SUSTAINABILITY

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4

- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)
- Complies with the requirements of AgBB including the LCI-values (August 2018) for use in the indoor environment.
- French regulation on indoor VOC emissions class A+

CERTIFICATES AND TEST REPORTS

- Approval for ESD protective products acc. IEC 61340-5-1,RISE Institute, No. ESD-20-0023
- Particle emission ISO 14644-1, Sikafloor®-2350 ESD, CSM Fraunhofer, SI 2011-1195
- Fire classification report, EN 13501-1, Ghent University, Report No. 20-1069-03
- Slip resistance DIN 51130, Roxeler, Certificate No. 020243-20-3
- Slip resistance, DIN 51130, Roxeler, Certificate No. 020243-20-2
- Slip resistance DIN 51130, Roxeler, Certificate No. 020243-20-2a
- Insulation Resistance DIN VDE 0100-600, kiwa, Test report No. P 12819-E
- Outgassing behavior ISO 14644-15, CSM Statement of Qualification, Fraunhofer IPA
- Outgassing Behavior, VOC/ SVOC, CSM Fraunhofer, Certificate No. SI 2011-1195
- CE marking and declaration of performance based on EN 13813:2002 Screed material and floor screeds — Screed material — Properties and requirements — Synthetic resin screed material
- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating

PRODUCT INFORMATION

Composition	Epoxy		
Packaging	Container Part A	24,6 kg	
	Container Part B	5,4 kg	
	Container Part A + Part B	30 kg	
Shelf life	18 months from date of production		
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. Refer to current Safety Data Sheet for information on safe handling and storage.		
Appearance and colour	Part A	coloured liquid	
	Part B	transparent liquid	
	Available in the approximate colours RAL 1014, RAL 5009, RAL 5012, RAL 5024, RAL 6010, RAL 6021, RAL 6027, RAL 7001, RAL 7005, RAL 7011, RAL 7015, RAL 7016, RAL 7024, RAL 7030, RAL 7032, RAL 7035, RAL 7036, RAL 7037, RAL 7038, RAL 7040, RAL 7042, RAL 7043, RAL 7047, RAL 9002, RAL 9005 Please contact Sika customer service for information on availability. Note: When the product is exposed to direct sunlight, there may be some discolouration and colour variation. This has no influence on the function and performance of the coating.		
Density	Part A	~1,70 kg/l	(EN ISO 2811-1)
	Part B	~1,00 kg/l	
	Mixed Product	~1,5 kg/l	
Solid content by mass	100 %		
Solid content by volume	100 %		

TECHNICAL INFORMATION

Shore D Hardness	~80 (after 7 days at +23 °C)	(EN ISO 868)
Abrasion resistance	~1.29 g, resin filled 20% with QS (H22/1000/1000) (af-ter 20 days at +23°C)	(EN ISO 5470-1)
Compressive strength	Cured 28 days at +23 °C ~120 MPa	(EN ISO 604)
Flexural-strength	Cured 28 days at +23 °C ~30 MPa	(EN ISO 178)
Tensile adhesion strength	> 1,5 N/mm ² (failure in concrete)	(EN 1542)
Electrostatic behaviour	Earth leakage resistance RE ²⁾ $R_G < 10^9 \Omega$ This product fulfils the requirements of ATEX 137	(IEC 61340-4-1)
	Typical average resistance to ground $R_G \leq 10^5 \Omega$ to $10^6 \Omega$	(EN 1081)
	Body voltage generation < 100 V System Resistance (Person/Floor/footwear) < $10^9 \Omega$	(IEC 61340-4-5)

Note: Measurement results can be affected by ESD clothing, ambient conditions, measurement equipment, cleanliness of the floor and the test personnel.

Earth leakage resistance $R_E^{2)}$

Characteristic value	Curing	Test standard
$< 10^9 \Omega$	7 days/23°C	DIN EN 61340-4-1

Usual average earth leakage resistance $R_E^{2)}$

Characteristic value	Curing	Test standard
$< 10^7 \Omega$	7 days/23°C	DIN EN 61340-4-1

Earth leakage resistance $R_E^{1)2)}$

Characteristic value	Curing	Test standard
$< 10^8 \Omega$	7 days/23°C	DIN EN 1081

Personnel charging

Characteristic value	Curing	Test standard
$< 100 \text{ V}$	7 days/23°C	DIN EN 61340-4-5

Resistance. Human-shoe-floor $R_E^{2)}$

Characteristic value	Curing	Test standard
$< 10^9 \Omega$	7 days/23°C	DIN EN 61340-4-5

The ESD shoes used in the EPA must have a resistance of $< 5 \text{ M Ohm}$ according to IEC 61340-4-3 at climate class 1 (12% relative humidity / +23 °C).

In order to achieve charges of $< 30 \text{ volts}$ of human body charge during the walking test (at 12% relative humidity / +23°C), it is necessary to use the following ESD shoe, for example:

Weeger ESD-Clog, Art. 48512-30, www.schuh-weeger.de

¹⁾ This product fulfils the requirements of TRGS 727

²⁾ The measurement results may vary depending on the ambient conditions (e.g. temperature, humidity) and measuring devices. The conductivity is tested in accordance with the status report 'Ableitfähige Beschichtungen für Industriefußböden' Deutsche Bauchemie e.V.:

Area of the installed coating system	Number of measurements
$< 10 \text{ m}^2$	1 measurement/1 m ²
10–100 m ²	10-20 measurements
$> 100 \text{ m}^2$	10 measurements/100 m ²

The measuring points must be at least 50 cm apart. If the required measurement value is not achieved at one point, further measurements must be taken within a radius of approx. 50 cm.

Temperature resistance

Short-term, maximum 7 days	+60 °C
----------------------------	--------

IMPORTANT:

No simultaneous mechanical and chemical strain

While the product is exposed to temperatures up to +60 °C, do not also subject it to chemical and/or mechanical strain, as it may cause damage to the product.

APPLICATION INFORMATION

Mixing ratio

Part A : Part B (by weight)	82 : 18
-----------------------------	---------

Consumption

Sikafloor® MultiDur ES-56 ESD (1,5 bis 2,0 mm)

Coating system	Product	Consumption
Primer	Sikafloor®-150/ -151	0,3 - 0,5 kg/m ²
Levelling: (if required)	Sikafloor®-150/ -151 Filler	see respective product data sheet
Derivation:	Sikafloor®-Leitset	see processing methods
Guiding film:	Sikafloor®-220 W Con- ductive	0,08 - 0,1 kg/m ²
Wearing layer:	Sikafloor®-2350 ESD with ~20% % (by weight) quartz sand 0,1-0,3 mm	2,5 kg/m ²

Sikafloor® MultiDur ES-59 ESD - Thin coating (ca. 0,5 mm)

Coating system	Product	Consumption
Primer	Sikafloor®-150/ -151	0,3 - 0,5 kg/m ²
Levelling: (if required)	Sikafloor®-150/ -151 Filler	see respective product data sheet
Derivation:	Sikafloor®-Leitset	see processing methods
Guiding film:	Sikafloor®-220 W Con- ductive	0,08 - 0,1 kg/m ²
Wearing layer:	Sikafloor®-2350 ESD	0,8 kg/m ²

Sikafloor® MultiDur ET-56 ESD - Textured coating (ca. 1,0 mm)

Coating system	Product	Consumption
Primer	Sikafloor®-150/ -151	0,3 - 0,5 kg/m ²
Levelling: (if required)	Sikafloor®-150/ -151 Filler	see respective product data sheet
Derivation:	Sikafloor®-Leitset	see processing methods
Guiding film:	Sikafloor®-220 W Con- ductive	0,08 - 0,1 kg/m ²
Wearing layer:	Sikafloor®-2350 ESD + ~1,5 % (by weight) Sika® Extender T Alternative: Sikafloor®-2350 ESD Thixo	0,8 kg/m ²

Note: These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

Sikafloor® MultiDur ES-55 ESD - System structure without conductive film
Please refer to the corresponding system data sheet.

Sikafloor® MultiDur ES-57 ESD - System structure for battery rooms
Please refer to the corresponding system data sheet.

Material temperature	Minimum	+15 °C
	Maximum	+30 °C
Ambient air temperature	Minimum	+15 °C
	Maximum	+30 °C
Relative air humidity	80 % r.h. max.	

Dew point	Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Low temperatures and high humidity conditions increase the probability of blooming.			
Substrate temperature	Minimum	+15 °C		
	Maximum	+30 °C		
Substrate moisture content	< 4 % parts by weight (Sika® Tramex moisture meter) No rising moisture (ASTM D4263, polyethylene sheet) The substrate must be visibly dry with no standing water.			
Pot Life	+10 °C	40 minutes		
	+20 °C	25 minutes		
	+30 °C	15 minutes		
Applied product ready for use	Temperature	Foot traffic	Light traffic	Full cure
	+15 °C	~48 hours	~3 days	~7 days
	+20 °C	~24 hours	~48 hours	~4 days
	+30 °C	~16 hours	~36 hours	~3 days
Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.				

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTATION

- Sika® Method Statement: Evaluation and preparation of surfaces for flooring systems
- Sika® Method Statement: Mixing and application of flooring systems

IMPORTANT CONSIDERATIONS

IMPORTANT:

Before application, confirm the moisture content of the substrate, relative humidity and dew point. If the moisture content is > 4 m%, Sikafloor® EpoCem® can be used. (temporary moisture barrier). Do not dilute the primer.

Freshly applied Sikafloor®- 2350 ESD must be protected from moisture, condensation and water for at least 24 hours.

ESD clothing, environmental conditions, measuring equipment, cleanliness of the floor and the test person have a significant influence on the measurement results.

Under certain conditions, combined underfloor heating with a high point load can lead to impressions. If heating is required, do not use gas, oil, paraffin or other fossil fuel heaters, these produce large amounts of both CO² and water vapour which adversely affect the finish. Only use electrically powered hot air blower systems for heating.

To select suitable protective equipment, please refer to our information sheets 'General information on occupational safety' (reference number 7510) and 'General information on wearing protective gloves' (reference number 7511) at www.sika.de. In this context,

we also recommend the BG Bau service pages for handling epoxy resins (www.bgbau.de/gisbau/fach-themen/epoxi).

ECOLOGY, HEALTH AND SAFETY

CE-LABELLING

See declaration of performance

HAZARD WARNINGS

GISCODE: RE 30 (previously RE 1)

This coding enables further information to be obtained on the BG Bau service pages (www.bgbau.de/gisbau), as well as assistance in creating operating instructions (www.wingis-online.de/wingisonline/).

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

IMPORTANT:

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

SUBSTRATE QUALITY

Substrate condition:

The substrate must have sufficient load-bearing capacity (compressive strength at least 25 N/mm²). The surface must be even, fine-grained, firm, dry, free of grease and oil and free of loose and sanding particles. Priming and levelling depending on the type of substrate. The tear-off strength must not be less than 1.5 N/mm²

PRODUCT DATA SHEET

Sikafloor®-2350 ESD
May 2024, Version 06.01
020811020020000196

SUBSTRATE QUALITY / PRE-TREATMENT

TREATMENT OF JOINTS AND CRACKS

Construction joints and existing static surface cracks in substrate require pre-treating before full layer application. Use Sikadur® or Sikafloor® resins.

SUBSTRATE MOISTURE CONTENT

The following test methods can be used to determine the substrate moisture content:

- Sika®-Tramex meter
- CM-measurement
- Oven-dry-method

The Product can be applied on substrates with a moisture content of < 4 %. The substrate must be visibly dry with no standing water.

SUBSTRATE CONDITION

Cementitious substrates (concrete / screed) must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1,5 N/mm².

Substrates must be free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

MIXING

Stir component A mechanically before mixing. Carefully combine components A + B in the prescribed mixing ratio before use. To prevent splashing or even spilling of the liquid, mix the components briefly at low speed using a continuously adjustable electric mixer. Then increase the stirring speed to a maximum of 300 rpm for intensive mixing. The mixing time is at least 3 minutes and is only complete when the mixture is homogeneous. Pour the mixed material into a clean container (repot) and mix again briefly as described above.

APPLICATION

IMPORTANT:

Temporary heating

If temporary heating is required, do not use gas, oil, paraffin or other fossil fuel heaters. These produce large quantities of both carbon dioxide and water vapour, which may adversely affect the finish. For heating, use only electric powered warm air blower systems.

IMPORTANT:

Performing pre-trials

Pre-trials/mock-up applications must be performed and procedures agreed with all parties before full project application.

IMPORTANT:

Temporary moisture barrier

Before application, confirm substrate moisture content, relative air humidity, dew point, substrate, air and product temperatures. If moisture content is > 4 % parts by weight, Sika®floor® EpoCem® may be applied as a Temporary Moisture Barrier (T.M.B.) system.

SMOOTH WEARING LAYER

Suitable application equipment

Large-Surface Scraper No. 656, Toothed blades No. 25 (www.polyplan.com)

Procedure

1. Pour the mixed Product onto the substrate.
Note:The consumption is specified in Application Information.
2. Apply the Product evenly over the surface with a serrated trowel.
3. To achieve a smooth finish, smooth the surface with the flat side of a trowel.
4. Back roll the surface in two directions at right angles with a steel spike roller.

TEXTURED WEARING LAYER

Suitable application equipment

- Trowel No. 999 (www.polyplan.com)
- Adhesive Spreader No. 777, Toothed blades No. 23 = A3 (www.polyplan.com)

Procedure

1. Pour the mixed Product onto the substrate.
Note:The consumption is specified in Application Information.
2. Apply the Product evenly over the surface with a serrated trowel.
3. Back roll the surface in two directions at right angles with a textured roller.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

PRODUCT DATA SHEET

Sikafloor®-2350 ESD
May 2024, Version 06.01
020811020020000196

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.

Sika Deutschland GmbH

Roofing
Kornwestheimer Strasse 103-107
70439 Stuttgart
Tel.: +49 711/8009-0
roofing@de.sika.com
www.sika.de/dachabdichtung



PRODUCT DATA SHEET

Sikafloor®-2350 ESD
May 2024, Version 06.01
020811020020000196

Sikafloor-2350ESD-en-DE-(05-2024)-6-1.pdf