BUILDING TRUST

SYSTEM DATA SHEET

Sikafloor® MultiDur ES-56 ESD

Smooth, conductive, epoxy ESD flooring system

DESCRIPTION

Sikafloor® MultiDur ES-56 ESD is a smooth finish, epoxy ESD flooring system. The system is designed to dissipate electrostatic charges (ESD) and protect sensitive equipment in electrostatic protected areas (EPA).

USES

Sikafloor® MultiDur ES-56 ESD is used in industrial buildings such as:
- Pharmaceutical facilities
- Automotive facilities
- Electronic facilities and data centres

Please note:
- The System may only be used by experienced professionals.
- The System may only be used for interior applications.

FEATURES

- Provides reliable and long-lasting ESD protection
- Seamless surface requires minimal cleaning and maintenance
- Functional finish with outstanding appearance
- Low Airborne Molecular Contaminants (AMC) emissions
- Low VOC emissions
- Good resistance to specific chemicals
- Very good mechanical resistance

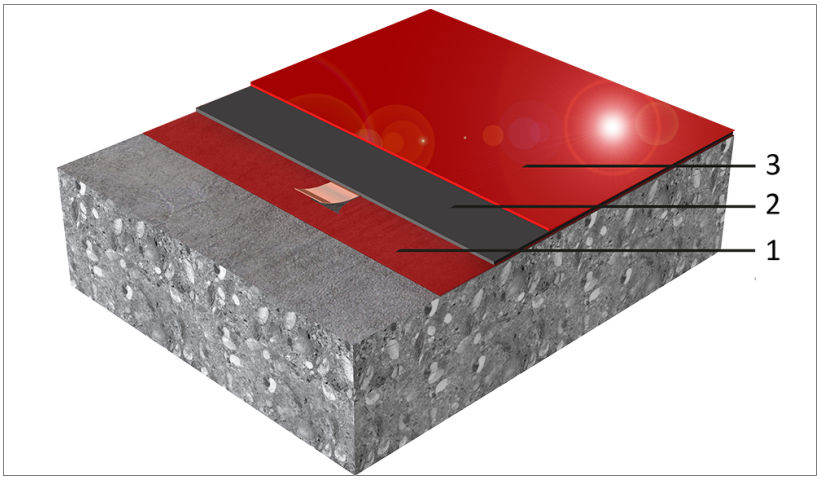
CERTIFICATES AND TEST REPORTS

- Approval for ESD protective products acc. IEC 61340, RISE Institute, No. ESD-21-0002
- Fire classification report, EN 13501-1, Ghent University, Report No. 20-1069-03

SYSTEM INFORMATION

System structure

Sikafloor® MultiDur ES-56 ESD



	Layer	Product
1.	Primer	Sikafloor®-150 Sikafloor®-151 Contact Sika Technical Service for information on choosing the right primer for your project.
2.	Conductive primer	Sikafloor®-220 W Conductive Sikafloor® Conductive Set
3.	Wearing layer	Sikafloor®-2350 ESD filled with 20 % Quartz sand (0.1–0.3 mm)

Composition	Epoxy
Appearance	Smooth, gloss finish
Colour	Available in the approximate colours RAL 1000, RAL 1001, RAL 1014, RAL 1019, RAL 3012, RAL 5012, RAL 5024, RAL 6000, RAL 6010, RAL 6020, RAL 6021, RAL 6027, RAL 6033, RAL 6034, RAL 7001 RAL 7005, RAL 7011, RAL 7015, RAL 7021, RAL 7024, RAL 7030, RAL 7032, RAL 7035, RAL 7036, RAL 7037, RAL 7038, RAL 7040, RAL 7042, RAL 7043, RAL 7045, RAL 7046, RAL 7047, RAL 9002, NCS S 3500-N
Nominal thickness	1.5 mm to 2 mm

TECHNICAL INFORMATION

Tensile adhesion strength	≥ 1.5 MPa		(EN 1542)
Reaction to fire	Class B_{fl}-s1		(EN 13501-1)
Electrostatic behaviour	Resistance to ground	$R_G < 10^9$ Ω	(IEC 61340-4-1)
	Typical average resistance to ground	$R_G < 10^5$–10^6 Ω	
	Body voltage generation	< 100 V	(IEC 61340-4-5)
	System resistance	$R_G < 10^9$ Ω	

ESD MEASUREMENT CONDITIONS AND SPECIFICATIONS
All measurement values for the system stated in the System Data Sheet (except those referring to proof statements) were measured using the following equipment and ambient conditions:

Condition or Equipment	Specification
Size of ESD-footwear	42 (EU) (UK: 8; US: 8.5)
Test person weight	90 kg
Ambient conditions	+23 °C and 50 % relative humidity
Measuring device for measuring resistance to ground	Metriso 2000 or 3000 (Warmbier) or comparable
Surface resistance probe	Carbon Rubber electrode. Weight: 2.50 kg
Rubber pad hardness	Shore A (60 ±10)
Measuring device for measuring body voltage generation	Walking Test Kit WT 5000 (Warmbier) or comparable

IMPORTANT
ESD footwear requirements
The ESD shoes used in the EPA must have a resistance of < 5 MOhm according to IEC 61340-4-3 at climate class 1 (12 % relative humidity and +23 °C). In order to achieve charges of < 30 volts of human body charge during the walking test (at 12 % relative humidity and +23 °C), we recommend using the following ESD shoes: Weeger ESD clog, art. 48512-30, www.schuh-weeger.de. **Note:** Measurement results can be affected by ESD clothing, ambient conditions, measurement equipment, cleanliness of the floor and the test personnel.

APPLICATION INFORMATION

Consumption

Layer	Product	Consumption
Primer	Sikafloor®-150 Sikafloor®-151	1-2 × 0.3–0.5 kg/m²
Conductive primer	Sikafloor®-220 W Conductive Sikafloor® Conductive Set	0.08–0.10 kg/m² 1 earthing point per 200–300 m², minimum 2 per room.
Wearing layer	Sikafloor®-2350 ESD filled with 20% quartz sand 0.1–0.3 mm	Maximum 2.5 kg/m²

Note: With thinner layers, the chemical and mechanical resistance and the flow properties can be reduced.

Ambient air temperature

Maximum	+30 °C
Minimum	+15 °C

Relative air humidity

Maximum	80 % r.h.

Dew point

Refer to the individual Product Data Sheet.

Substrate temperature

Maximum	+30 °C
Minimum	+15 °C

Substrate moisture content

Refer to the individual Product Data Sheet.

Waiting time to overcoating

For the waiting time to overcoating of the primer, refer to the individual Product Data Sheet.
Before applying Sikafloor®-2350 ESD on Sikafloor®-220 W Conductive, allow:

Temperature	Minimum	Maximum
+15 °C	~26 hours	~7 days
+20 °C	~17 hours	~5 days
+30 °C	~12 hours	~4 days

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

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 apply when the last layer of the system has been applied. Times are affected by changing ambient conditions, particularly temperature and relative humidity.

BASIS OF PRODUCT DATA

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.

FURTHER DOCUMENTATION

Refer to the following method statements:
- Sika Method Statement — Evaluation and preparation of surfaces for flooring systems
- Sika Method Statement — Sikafloor® mixing and application

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

APPLICATION

ESD CONDUCTIVITY MEASUREMENTS
Recommended number of conductivity measurements is specified in the following table:

Ready applied area	Number of measurements
< 10 m²	6
≥ 10 m² and < 100 m²	10 to 20
≥ 100 m² and < 1000 m²	50
≥ 1000 m² and < 5000 m²	100

If the measurements yield values that are outside of the agreed specification, follow these steps:

1. Carry out one additional measurement within a radius of approximately 30 cm around the original measuring point.

If the value of the new measurement meets the agreed specification, the original measurement can be disregarded.
If the value of the new measurement does not meet the agreed specification, repeat the measurement described above until the fulfilment of the requirements have been verified.
If the requirements cannot be verified, contact Sika Technical Services.
INSTALLATION OF EARTHING POINTS
Refer to Sika Method Statement: Sika Method Statement — Sikafloor® mixing and application
Number of earthing connections per room: Minimum of 2 earthing connections. The optimum number of earthing connections depends on the local conditions and must be specified on drawings or other contract documentation.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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