

SYSTEM DATA SHEET

Sikafloor® MultiDur ES-55 ESD ECC MY

Smooth, dissipative epoxy ESD flooring system over epoxy hybrid screed

DESCRIPTION

Sikafloor® MultiDur ES-55 ESD ECC MY is a smooth finish, electrostatic dissipative (ESD) epoxy flooring system incorporating Sika® EpoCem moisture barrier system. The system is designed to dissipate electrostatic charges and protect electrostatic-sensitive devices and equipment in Electrostatic Protected Areas (EPA).

USES

Sikafloor® MultiDur ES-55 ESD ECC MY is used in industrial buildings such as:

- Pharmaceutical facilities
- Automotive facilities
- Electronic manufacturing facilities and data centres

Please note:

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

CHARACTERISTICS / ADVANTAGES

- 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
- Smooth gloss finish
- Good resistance to specific chemicals

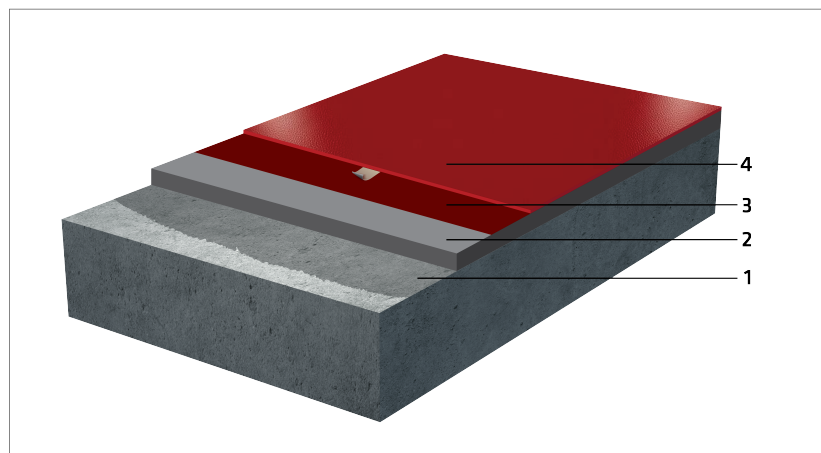
CERTIFICATES AND TEST REPORTS

- Insulation Resistance DIN VDE 0100-600, kiwa, Test report No. P 12819-E
- Fire Classification Report EN 13501-1, ofi, No. 2102463
- Electrostatic properties ASTM F 150, KIWA, Report No. P 13238-1-E

SYSTEM INFORMATION

System Structure

Sikafloor® MultiDur ES-55 ESD ECC MY



Layer	Product
1. Primer	Sikafloor®-80 EpoCem® Primer
2. Temporary Moisture Barrier (TMB) / Levelling screed	Sikafloor®-81 EpoCem® New HC
3. Sealer coat	Sikafloor®-161 HC + Sika® Extender T
4. Wearing layer + Conductive Set	Sikafloor®-2017 Earthing Kit Sikafloor®-2350 ESD CN filled with 10–20 % with Sikadur® 508 - Quartz sand (0.1–0.3 mm)

Composition	Epoxy
Appearance	Smooth, gloss finish
Colour	Available in the approximate colours RAL 7032, RAL 7035, RAL 7040.
Nominal Thickness	~3.5 mm to 4 mm

TECHNICAL INFORMATION

Reaction to Fire	Class B _{fl} -s1	(EN 13501-1)
Chemical Resistance	Laboratory-defined resistance to many individual chemicals. Before proceeding, contact Sika Technical Service for specific information.	
Electrostatic Behaviour	Resistance to ground	$R_G < 10^9 \Omega$ (IEC 61340-4-1)
	Typical average resistance to ground	$R_G < 10^6\text{--}10^7 \Omega$
	Body voltage generation	$< 100 \text{ V}$ (IEC 61340-4-5)
	System resistance	$R_G < 10^9 \Omega$

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 $< 5 \text{ MOhm}$ according to IEC 61340-4-3 at climate class 1 (12 % relative humidity and +23 °C). In order to achieve charges of $< 30 \text{ volts}$ 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.schuhweeger.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
	1. Primer	2 × Sikafloor®-80 Epo-Cem® Primer	0.30–0.50 kg/m ²
	2. Temporary Moisture Barrier (TMB) / Leveling screed	1 × Sikafloor®-81 Epo-Cem® New HC	2.25 kg/m ² per mm For TMB, min. thickness 2 mm
	3. Sealer coat / Primer	2 × Sikafloor®-161 HC + 2% Sika® Extender T	0.08–0.10 kg/m ² per coat
	4. Wearing layer + Conductive Set	Sikafloor®-2017 Earthing Kit 1 × Sikafloor®-2350 ESD CN filled with 10–20 % Sikadur 508 Quartz sand (0.1–0.3 mm)	1 earthing point per 200–300 m ² , minimum 2 per room. 1.5–2.5 kg/m ²
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 / Overcoating	For the waiting time to overcoating of the primer, refer to the individual Product Data Sheet.		
Applied Product Ready for Use	Temperature	Foot traffic	Light traffic
	+10 °C	48 hours	3 days
	+20 °C	24 hours	2 days
	+30 °C	16 hours	36 hours
Full cure			
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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER INFORMATION

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

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

APPLICATION

ESD CONDUCTIVITY MEASUREMENTS

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

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

If the measurements yield values that are outside of the agreed specification, follow these steps:
Carry out one additional measurement within a radius of approximately 30 cm around the original measuring point.

1. 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 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.

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.

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System Data Sheet

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