BUILDING TRUST

SYSTEM DATA SHEET

Sikafloor® MultiDur ES-39 ECF

Smooth, unicolour conductive epoxy flooring system with high chemical resistance

PRODUCT DESCRIPTION

Sikafloor® MultiDur ES-39 ECF is an electrostatic conductive self-smoothing, coloured epoxy flooring system with high chemical resistance.

USES

Sikafloor® MultiDur ES-39 ECF installation works to be carried out only by Sika Approved Contractors. Please observe information given by Product Data Sheets.

The System is used in industrial buildings such as:
- Chemical and bunding areas
- Electronic facilities and data centres

CHARACTERISTICS / ADVANTAGES

- Very good resistance to specific chemicals
- Good crack bridging ability
- Impermeable to liquids
- Electrostatically conductive

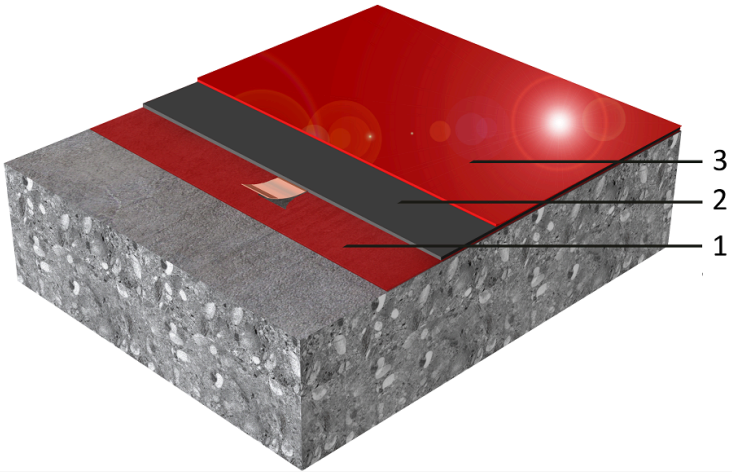
APPROVALS / STANDARDS

- Spark Resistance, UFGS-09 97 23, Report No. P 13185-E
- Fire classification report EN 13501-1, MPA, No. 20210025/01

SYSTEM INFORMATION

System Structure

Sikafloor® MultiDur ES-39 ECF



Layer	Product
1. Primer	Sikafloor®-150 Sikafloor®-151 Sikafloor®-156 Sikafloor®-161 Contact Sika Technical Service for information on choosing the right primer for your project.
2. Conductive primer + Earthing connection	Sikafloor®-220 W Conductive + Sikafloor® Conductive Set
3. Final conductive coating	Sikafloor®-390 ECF N

IMPORTANT
System structure
The system structure as described in the table must not be changed.

Composition

Epoxy

Appearance

Smooth, gloss finish

Colour

Cured system colour	Available in various colour shades.

Exact colour matching
Note: Due to the nature of carbon fibres providing the conductivity, it is not possible to achieve exact colour matching. With very bright colours (such as yellow and orange), this effect is increased.

Nominal thickness

1.5 mm

TECHNICAL INFORMATION

Abrasion Resistance	Cured 7 days at 23 °C	~ 908 mg (H22 / 1000 g / 1000 cycles)	(EN ISO 5470-1)
Tensile adhesion strength	≥ 1.5 MPa		(EN 1542)
Reaction to Fire	Class B_{fl}-S1		(EN 13501-1)
Skid / Slip Resistance	Sliding friction coefficient	0,45	(DIN 51131)

Electrostatic Behaviour

Resistance to ground	$R_G < 10^9\ \Omega$	(IEC 61340-4-1)
Typical average resistance to ground	$R_G < 10^5–10^6\ \Omega$	

ECF 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 % r.h.
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)

Measurement results during testing
Note: If values are lower or higher than required, additional measurements have to be carried out about 30 cm around the point where the faulty readings are located. If the re-measured values are in accordance with the requirements, the total area is acceptable.

APPLICATION INFORMATION

Consumption

Layer	Product	Consumption
Primer	Sikafloor®-150 Sikafloor®-151 Sikafloor®-156 Sikafloor®-161	1-2 × ~0.3–0.5 kg/m²
Levelling	Sikafloor®-150 Sikafloor®-151 Sikafloor®-156 Sikafloor®-161	Refer to the individual Product Data Sheet.
Earthing connection	Sikafloor® Conductive Set	1 earthing point per approx. 200 -300 m², min. 2 per room.
Conductive Primer	Sikafloor®-220 W Conductive	1 x 0.08 - 0.10 kg/m²
Final conductive coating	Sikafloor®-390 ECF	2.5 kg/m²

Note: Consumption data is theoretical and does 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.

Ambient Air Temperature

Maximum	+30 °C
Minimum	+10 °C

Relative Air Humidity

Maximum	80 % r.h.

Dew Point
Refer to the individual Product Data Sheet.

Substrate Temperature

Maximum	+30 °C
Minimum	+10 °C

Substrate Moisture Content
Refer to the individual Product Data Sheet.

Waiting Time / Overcoating

Before applying Sikafloor®-220 W Conductive on the primer layer allow:

Temperature	Minimum	Maximum
+10 °C	17 hours	4 days
+20 °C	9 hours	2 days
+30 °C	7 hours	1 days

Before applying Sikafloor®-390 ECF N on Sikafloor®-220 W Conductive allow:

Temperature	Minimum	Maximum
+10 °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
+10 °C	48 hours	3 days	10 days
+20 °C	30 hours	2 days	7 days
+30 °C	20 hours	1 days	5 days

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

VALUE BASE

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 DOCUMENTS

Please refer to:
- Sika® Method Statement Mixing and Application of Flooring Systems
- Sika® Method Statement Surface Evaluation & Preparation

ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

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.

MAINTENANCE

To maintain the appearance of the floor after application:
1. Immediately remove all spillages.
2. IMPORTANT Use suitable detergents and waxes only.Regularly clean using rotary brush, mechanical scrubber, scrubber dryer, high pressure washer, or wash and vacuum equipment.

Refer to Sika Method Statement: Sikafloor®-Cleaning Regime.

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.

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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