

SYSTEM DATA SHEET

Sikafloor® MultiDur EB-39 ECF

Broadcast, tough-elastic, unicolour conductive epoxy floor covering with high chemical resistance

DESCRIPTION

Sikafloor® MultiDur EB-39 ECF is a two part, electrostatic conductive, tough-elastic, self-smoothing, broadcast coloured epoxy flooring system with very high chemical resistance. "Total solid epoxy composition acc. to the test method Deutsche Bauchemie e.V. (German Association for construction chemicals)".

USES

Sikafloor® MultiDur EB-39 ECF may only be used by experienced professionals.

It is used as:

- Tough elastic, chemically resistant coating for concrete and screed surfaces in bund areas for the protection against water contaminating liquids (according resistance table)
- Electrostatic conductive coating for areas subject to chemical exposure and demands for slip resistance

CHARACTERISTICS / ADVANTAGES

- High chemical resistance
- Mechanical resistance
- Impervious to liquids
- Abrasion resistant
- Slip resistant surface

SUSTAINABILITY

- Conforms to AgBB (2012) for use in indoor environment. Test report No. 392-2015-00129301_02. Eurofins Product Testing.
- Conformity with LEED v2009 IEQc 4.2: Low-Emitting Materials - Paints and Coatings

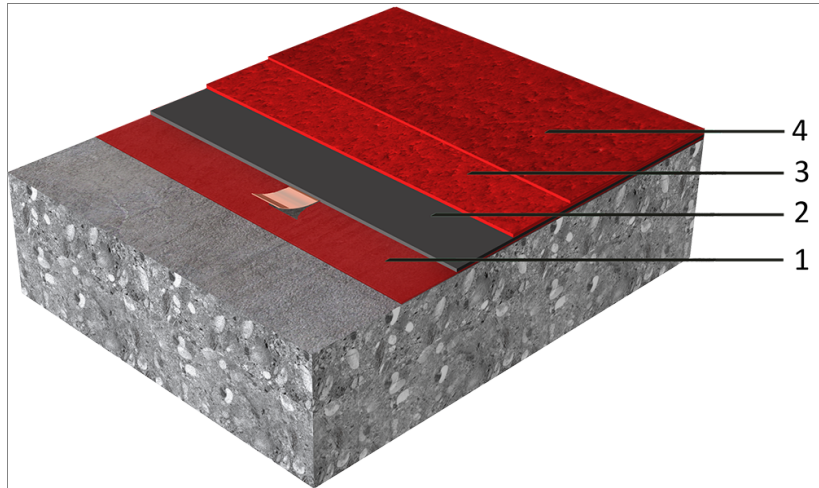
APPROVALS / CERTIFICATES

- Self-smoothing, coloured epoxy resin coating according to EN 1504-2: 2004 and EN 13813, DoP 02 08 01 02 020 000008 2017, certified by Factory Production Control Body No. 0921, certificate 2017, and provided with the CE-mark
- Outgassing emission certificate Sikafloor®-390 ECF CSM: CSM Statement of Qualification - ISO 14644-8, class -9.6 - Report No. SI 1204-593
- Fire classification in accordance with DIN 4102 part 1 and part 14, Report-No. 130682-2, class B1, Institute Hoch, Germany, June 2013

SYSTEMS

System structure

Sikafloor® MultiDur EB-39 ECF:



1. Primer + Earthing connection	Sikafloor®-156/-160/-161 + Sika® Earthing Kit
2. Conductive primer	Sikafloor®-220 W Conductive
3. Conductive base coating + broadcast	Sikafloor®-390 ECF, broadcast to excess with silicone carbide 0.5-1.0 mm.
4. Final topcoat	Sikafloor®-390 + 5 % wt.-% Thinner C

The system configurations as described must be fully complied with and may not be changed.

Composition	Epoxy
Appearance	Broadcast - semi gloss
Colour	Almost unlimited choice of colour shades. Under direct sun radiation there may be some discolouration and colour deviation, this has no influence on the function and performance of the coating. Please contact our customer service, for information of which colors are sold in Denmark.
Nominal thickness	~ 2.0 - 2.5 mm

TECHNICAL INFORMATION

Tensile strength	~ 10 N/mm ²	(14 days / +23 °C)	(DIN 53455)
Electrostatic behaviour	Resistance to ground ¹	$R_g < 10^9 \Omega$	(IEC 61340-4-1)
	Typical average resistance to ground ²	$R_g < 10^6 \Omega$	(DIN EN 1081)

¹ In accordance with IEC 61340-5-1 and ANSI/ESD S20.20.

² Readings may vary, depending on ambient conditions (i.e. temperature, humidity) and measurement equipment.

APPLICATION INFORMATION

Consumption	Coating	Product	Consumption
	Primer	Sikafloor®-156/-160/-161	1-2 x ~ 0.3 - 0.5 kg/m ²
	Levelling (if required)	Sikafloor®-156/-160/-161 levelling mortar	Refer to PDS of Sikafloor®-156/-160/-161
	Earthing connection	Sika® Earthing Kit	1 earthing point per approx. 200 -300 m ² , min. 2 per room.
	Conductive primer	Sikafloor®-220 W Conductive	1 x 0.08 - 0.10 kg/m ²
	Conductive base coating	Sikafloor®-390 ECF, unfilled	1x 1.6 kg/m ² Binder, broadcast to excess with silicone carbide 0.5-1.0. mm*
	Final topcoat	Sikafloor®-390 + 5 % Thinner C	0.75 - max. 0.85 kg/m ²

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

*Silicone carbide "SiC 18/35 in a splintery grain shape and a grain size of 0.5-1.0 mm" can be purchased from ESH-SiC GmbH, Günter-Wiebke-Str. 1, 50226 Frechen, Germany, <http://www.esk-sic.com>. As alternative the conductive aggregate "Granucol Conduct No. 7" (grain size 0.6 - 1.2 mm) can be used. Supplier: Gebrüder Dorfner GmbH & Co. Kaolin- und Kristallquarzsand-Werke KG, Scharhof 1, 92242 Hirschau, Germany, <http://www.dorfner.com>

Ambient air temperature	+10 °C min. / +30 °C max.																																				
Relative air humidity	80 % 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.																																				
Substrate temperature	+10 °C min. / +30 °C max.																																				
Substrate moisture content	<4 % pbw moisture content. Test method: Sika Tramex Meter, CM-measurement or Oven-Dry-Method. No rising moisture according to ASTM (Polyethylene-sheet).																																				
Waiting time to overcoating	<p>Before applying Sikafloor®-220 W Conductive on Sikafloor®-156/160/161 allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>24 hours</td> <td>4 days</td> </tr> <tr> <td>+20°C</td> <td>12 hours</td> <td>2 days</td> </tr> <tr> <td>+30°C</td> <td>8 hours</td> <td>1 days</td> </tr> </tbody> </table> <p>Before applying Sikafloor®-390 ECF on Sikafloor®-220 W Conductive allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>26 hours</td> <td>7 days</td> </tr> <tr> <td>+20°C</td> <td>17 hours</td> <td>5 days</td> </tr> <tr> <td>+30°C</td> <td>12 hours</td> <td>4 days</td> </tr> </tbody> </table> <p>Before applying Sikafloor®-390 on Sikafloor®-390 ECF broadcast with conductive aggregate allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>48 hours</td> <td>6 days</td> </tr> <tr> <td>+20°C</td> <td>24 hours</td> <td>6 days</td> </tr> <tr> <td>+30°C</td> <td>18 hours</td> <td>2 days</td> </tr> </tbody> </table> <p>Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.</p>	Substrate temperature	Minimum	Maximum	+10°C	24 hours	4 days	+20°C	12 hours	2 days	+30°C	8 hours	1 days	Substrate temperature	Minimum	Maximum	+10°C	26 hours	7 days	+20°C	17 hours	5 days	+30°C	12 hours	4 days	Substrate temperature	Minimum	Maximum	+10°C	48 hours	6 days	+20°C	24 hours	6 days	+30°C	18 hours	2 days
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Applied product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 48 hours	~ 6 days	~ 14 days
+20°C	~ 30 hours	~ 4 days	~ 10 days
+30°C	~ 20 hours	~ 3 days	~ 7 days

Note: Times are approximate and will be affected by changing ambient conditions

PRODUCT INFORMATION

Packaging	Please refer to individual Product Data Sheet.
Shelf life	Please refer to individual Product Data Sheet.
Storage conditions	Please refer to individual Product Data Sheet.

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

Please refer to:

- Sika® Method Statement Mixing and Application of Flooring Systems
- Sika® Method Statement Surface Evaluation & Preparation

IMPORTANT CONSIDERATIONS

- This system may only be used by experienced professionals.
- Due to the nature of carbon fibres providing the conductivity, surface irregularities might be possible. This has no influence on the function and performance of the coating.
- Do not apply the Sikafloor® MultiDur EB-39 ECF System on substrates in which significant vapour pressure may occur.
- Do not blind the primer.
- The freshly applied final conductive coating of the Sikafloor® MultiDur EB-39 ECF system must be protected from damp, condensation and water for at least 24 hours.
- Only start application of Sikafloor® conductive primer after the priming coat has dried tack-free all over. Otherwise there is a risk of wrinkling or impairing of the conductive properties.
- Maximum layer thickness of final conductive coating: ~ 1.5 mm. Excessive thickness (more than 2.5 kg/m²) causes reduced conductivity.
- Under certain conditions, underfloor heating combined with high point loading, may lead to imprints in the resin.
- 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.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking - reducing or breaking conductivity.
- For exact colour matching, ensure the final topcoat

of the Sikafloor® MultiDur EB-39 ECF system in each area is applied from the same control batch numbers.

- The test person, ambient conditions, measurement equipment, cleanliness of the floor have a substantial influence on the measurement results.

All measurement values for the Sikafloor® MultiDur EB-39 ECF system stated in the system data sheet (apart from the ones referring to proof statements) were measured under the following conditions:

Ambient conditions:	+23 °C/50%
Measurement device for the Resistance to Ground:	Metriso 2000 (Warmbier) or comparable
Surface resistance probe:	Tripod electrode acc. DIN EN 1081
Rubber pad hardness:	Shore A 60 (± 10)

The number of conductivity measurements is strongly recommended to be as shown in the table below:

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

In case of values lower/higher as required, additional measurements has to be carried out, approx. 30 cm around the point with insufficient readings. If the newly measured values are in accordance with the requirements, the total area is acceptable.

Installation of earthing points: Please refer to the Method Statement: "MIXING & APPLICATION OF FLOORING SYSTEMS".

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 using available drawings.

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.

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Sikafloor® MultiDur EB-39 ECF
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020811900000000044

MAINTENANCE

CLEANING

Please refer to the individual Sikafloor® Cleaning Regime.

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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