BUILDING TRUST

SYSTEM DATA SHEET

Sikafloor® MultiDur ET-31 ECF/V

TEXTURED, ELECTROSTATICALLY CONDUCTIVE, CHEMICALLY RESISTANT EPOXY COATING FOR VERTICAL SURFACES

DESCRIPTION

Sikafloor® MultiDur ET-31 ECF/V is a two part, textured, electrostatic conductive, coloured epoxy coating 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

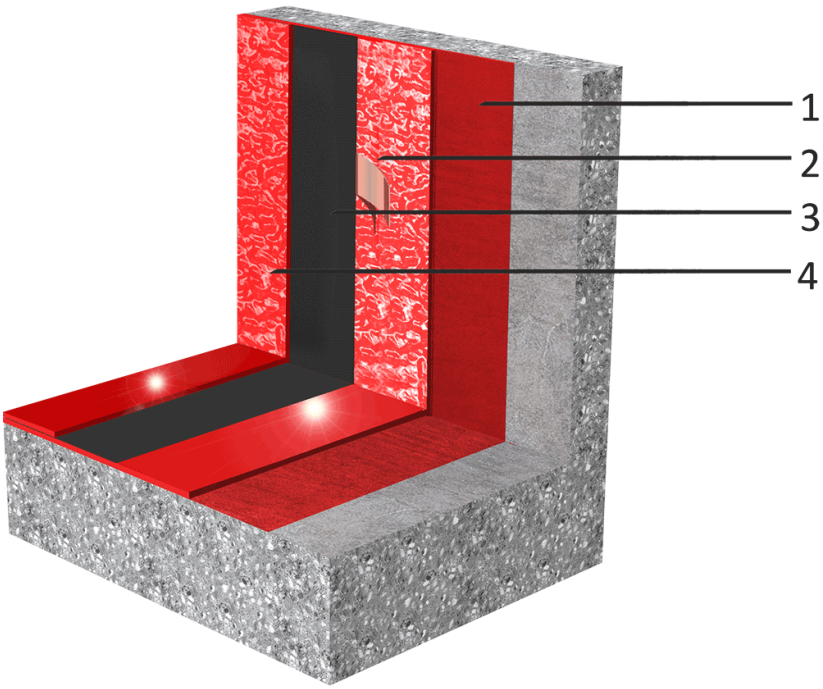
Sikafloor® MultiDur ET-31 ECF/V may only be used by experienced professionals.
It is used as:
- Chemically highly resistant epoxy coating for vertical surfaces in concrete and screed surfaces in bund areas for the protection against water contaminating liquids (contact Sika technical service for specific information)
- Electrostatically conductive epoxy coating for vertical surfaces subject to chemical and mechanical exposure in production and storage facilities

CHARACTERISTICS / ADVANTAGES

- Very high chemical resistance
- High mechanical resistance
- Impervious to liquids
- Abrasion resistant
- Electrostatically conductive
- Good sag resistance

SYSTEM INFORMATION

System Structure



1. Primer	Sikafloor®-156/-160/-161
2. Conductive undercoat + Earthing connection	Sikafloor®-381 ECF filled with 2.5 - 4.0 % Extender T + Sika® Earthing Kit
3. Conductive primer	Sikafloor®-220 W Conductive
4. Final conductive coating	Sikafloor®-381 ECF filled with 2.5 - 4.0 % Extender T

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

Chemical base	Epoxy
Appearance	Orange peel textured, semi-gloss
Colour	Almost unlimited choice of colour shades. 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. Under direct sun light there may be some variations and colour variation, this has no influence on the function and performance of the coating.
Nominal Thickness	~ 1.5 mm

TECHNICAL INFORMATION

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/m²
Scratch coat (if required)	Sikafloor®-156/-160/-161	Refer to PDS of Sikafloor®-156/-160/-161
Conductive undercoat	Sikafloor®-381 ECF filled with 2.5 - 4.0 % Extender T	1 x 1.25 kg/m²
Earthing connection	Sika® Earthing Kit	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®-381 ECF filled with 2.5 - 4.0 % Extender T	1 x 1.25 kg/m²

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

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 / Overcoating

Before applying Sikafloor®-381 ECF on Sikafloor®-156/160/161 allow:

Substrate temperature	Minimum	Maximum
+10 °C	24 hours	4 days
+20 °C	12 hours	2 days
+30 °C	8 hours	1 days

Before applying Sikafloor®-220 W Conductive on Sikafloor®-381 ECF allow:

Substrate temperature	Minimum	Maximum
+10 °C	48 hours	3 days
+20 °C	24 hours	2 days
+30 °C	12 hours	1 days

Before applying Sikafloor®-381 ECF on Sikafloor®-220 W Conductive allow:

Substrate temperature	Minimum	Maximum
+10 °C	26 hours	7 days
+20 °C	17 hours	5 days
+30 °C	12 hours	4 days

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	~ 24 hours	~ 3 days	~ 10 days
+20 °C	~ 18 hours	~ 2 days	~ 7 days
+30 °C	~ 12 hours	~ 1 days	~ 5 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.

FURTHER DOCUMENTS

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

LIMITATIONS

- 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 ET-31 ECF/V 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 ET-31 ECF/V 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.
- 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 CO_2 and H_2O 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 conductive coating of the Sikafloor® MultiDur ET-31 ECF/V system in each area is applied from the same control batch numbers.
- Please note, that measuring results of the orange peel textured Sikafloor® MultiDur ET-31 ECF/V system may vary due to a difference in surface profile.
- 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 ET-31 ECF/V 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

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

Ready applied area	**Number of measurements**
< 10 m²	6 measurements
< 100 m²	10-20 measurements
<1000 m²	50 measurements
<5000 m²	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.

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.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.

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.

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.

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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