BUILDING TRUST

SYSTEM DATA SHEET

Sikagard® WallCoat WS-12 ESD

SEAMLESS, SMOOTH, ESD WALL COATING

CE

DESCRIPTION

The Sikagard® WallCoat WS-12 ESD system is a seamless, smooth, low VOC, ESD epoxy coating for vertical surfaces. It consist out of the two part, self-smoothing, non-conductive epoxy coating Sikagard® WallCoat N and the two part, water dispersed, coloured ESD epoxy roller coating Sikafloor®-230 ESD TopCoat. This system offers the opportunity to upgrade a normal epoxy wall coating to a wall coating which fulfils ESD requirements.

USES

Sikagard® WallCoat WS-12 ESD may only be used by experienced professionals.
The Sikagard® WallCoat WS-12 ESD System is used as:

- Dissipative coloured wall coating for electrostatic protected areas (EPA).
- Particularly suitable for areas with requirements for the lowest electrostatic charge and dissipative surface
- Typical applications include clean rooms in the electronics industry, microbiology/microchemistry sectors, production plants in the automobile industry etc.

CHARACTERISTICS / ADVANTAGES

- Body voltage generation < 10 V
- Conforms to the requirements of ANSI/ESD S20.20 and IEC 61340-5-1
- Fulfils ESD-requirements at > 12 % RH/+23°C*
- Water based system
- Easy to apply & easy to clean
- Easy to refurbish, can be overcoated directly with itself
- Low odour
- Matt surface

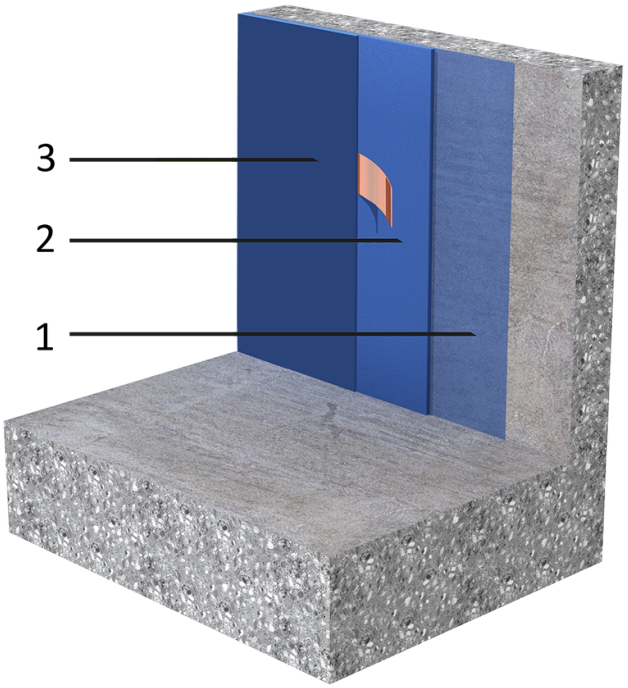
APPROVALS / STANDARDS

- Coating for surface protection of concrete according to EN 1504-2:2004, Declaration of Performance 02 08 01 02 037 0 000001 2017, certified by notified factory production control certification body 0921,, certificate of conformity of the factory production control 2017, and provided with the CE marking.
- Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 02 08 01 02 037 0 000001 2017, certified by notified factory production control certification body 0921,, certificate of conformity of the factory production control 2017, and provided with the CE marking.

SYSTEM INFORMATION

System Structure

Sikagard® WallCoat WS-12 ESD:



1. Primer	1 x Sikagard® Wallcoat N + 5 % H_2O
2. Intermediate layer + Earthing connection	1 x Sikagard® Wallcoat N + Sika® Earthing Kit
3. Final conductive wall coating	2 x Sikafloor®-230 ESD TopCoat

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

Chemical base	Epoxy
Appearance	Matt
Colour	ca. RAL 1001, 1015, 7030, 7032, 7035, 7038, 7040, 7042, 7044, 7046, 9002. All colours are approximate. Under direct sun light there may be some dis-colouration and colour deviation; this has no influence on the function and performance of the coating.
Nominal Thickness	~ 0.3 - 0.5 mm

TECHNICAL INFORMATION

Electrostatic Behaviour

Resistance to ground[1]	$R_g < 10^9\ \Omega$	(IEC 61340-4-1)
Typical average resistance to ground[2]	$R_g < 10^5 - 10^6 \Omega$	(DIN EN 1081)
Body voltage generation[2]	< 100 V	(IEC 61340-4-5)

[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	Sikagard® Wallcoat N + 5% H_2O	1 x ~ 0.15 – 0.20 kg/m²
Intermediate layer	Sikagard® Wallcoat N	1 x ~ 0.15 - 0.25 kg/m²
Earthing connection	Sika® Earthing Kit	1 earthing point per approx. 200 -300 m², min. 2 per room.
Final conductive wall coating	Sikafloor®-230 ESD TopCoat	2 x 0.10 kg/m² per coat

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

Ambient Air Temperature

+10 °C min. / +30 °C max.

Relative Air Humidity

During curing the humidity should not exceed 75 % max. Adequate fresh air ventilation or a dehumidifier must be provided to remove the excess moisture from the curing product.

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 Sikagard® Wallcoat N on Sikagard® Wallcoat diluted with 5% H_20 TopCoat N allow:

Substrate temperature	Minimum	Maximum
+10 °C	3 hours	7 days
+20 °C	3 hours	7 days
+30 °C	2 hours	7 days

Before applying Sikafloor®-230 ESD TopCoat on Sikagard® Wallcoat N allow:

Substrate temperature	Minimum	Maximum
+10 °C	3 hours	7 days
+20 °C	3 hours	7 days
+30 °C	2 hours	7 days

Before applying Sikafloor®-230 ESD TopCoat on Sikafloor®-230 ESD TopCoat allow:

Substrate temperature	Minimum	Maximum*
+10 °C	36 hours	10 days
+20 °C	36 hours	8 days
+30 °C	36 hours	7 days

* If the maximum waiting time is exceed, Sikafloor-230 ESD Top Coat must to be slightly grinded by using a brown grinding pad.

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

Applied Product Ready for Use

Temperature	Light traffic	Full cure
+10 °C	~ 3 days	~ 10 days
+20 °C	~ 2 days	~ 7 days
+30 °C	~ 1 days	~ 5 days

PRODUCT INFORMATION

Packaging

Please refer to individual Product Data Sheet.

Shelf life

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

- The freshly applied final conductive coating of the Sikagard® WallCoat WS-12 ESD system must be protected from damp, condensation and water for at least 24 hours.
- Ensure adequate ventilation during application and drying (especially at temperatures < 13°C). Otherwise the reaction and drying processes may be impaired.
- For possible changes in the composition of the recommended cleaning- and maintenance agents and their effects on the floor characteristics, Sika does not take over liability.
- Do not apply Sikagard® WallCoat WS-12 ESD on gypsum plaster boards, if in use for wet areas.
- The gloss of the applied material is influenced by humidity, temperature and absorbency of the substrate.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking
- 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.
- For exact colour matching, ensure the final conductive coating of the Sikagard® WallCoat WS-12 ESD system in each area is applied from the same control batch numbers.
- ESD clothing, ambient conditions, measurement equipment, cleanliness of the walls and the test person have a substantial influence on the measurement results.

All measurement values for the Sikagard® WallCoat WS-12 ESD 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:	Carbon Rubber electrode. Weight: 2.50 kg
Rubber pad hardness:	Shore A 60 (± 10)
Measurement device for the Walking Test:	Walking Test Kit WT 5000 (Warmbier) or comparable

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”.
Number 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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