

PRODUCT DATA SHEET

Sikafloor®-305 W ESD

2-part, PUR, waterborne, matt, coloured ESD-roller coat

PRODUCT DESCRIPTION

Sikafloor®-305 W ESD is a two-part water based, low VOC, polyurethane, coloured matt ESD seal coat.

USES

Sikafloor®-305 W ESD may only be used by experienced professionals.

Sikafloor®-305 W ESD is used as matt coloured ESD seal coat for Sikafloor® epoxy and PUR flooring systems.

CHARACTERISTICS / ADVANTAGES

- Very low VOC emissions
- Water based
- Easy to apply
- Easy to refurbish, can be overcoated directly with itself
- Very low odour
- Good UV resistance, non-yellowing
- Easy to clean
- Complies with general ESD requirements
- Matt surface
- Suitable as floor covering according to DIN VDE 0100-410 / T610 as top coat of non-conductive Sikafloor products

ENVIRONMENTAL INFORMATION

Conformity with LEED v4 MRc 4 (Option 2): Building Product Disclosure and Optimization - Material Ingredients.

APPROVALS / STANDARDS

- Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 0208120600300000051008, certified by Factory Production Control Body 0921 and provided with the CE mark.
- Coating for concrete protection according to EN 1504-2:2004 and the EN 13813:2002, Declaration of Performance 0208120600300000051008, certified by Factory Production Control Body 0921 and provided with the CE mark.
- Test of Floors regarding ESD-protective properties, SP-Technical Research Institute of Sweden, Report No. 5F005664:A and No. 5F005664:B.
- Approval for ESD products according to IEC 61340, DNo. 230-15-0020, rev 1.
- Varnishability test according to VW-standard PV 3.10.7, Report No. 14-04-14201871-19.
- Slip resistance test according DIN 51130, Result: R 11, Report No. 020143-15-9.
- Fire classification according to DIN EN 13501-1, Test reports KB-Hoch-150461-2, Test Institute Hoch, DE-Fladungen.
- Fire classification according to DIN EN ISO 9239-1, Test reports KB-Hoch-150460-2, Test Institute Hoch, DE-Fladungen.
- Fire classification according to DIN EN 11925-2, Test reports KB-Hoch-150459-2, Test Institute Hoch DE-Fladungen.
- Test of the Insulation Resistance according to DIN VDE 0100-410/T610. Test Report P 9915-E, Kiwa-Polymer Institut.

PRODUCT INFORMATION

Chemical Base	Polyurethane		
Packaging	Part A	8.5 kg containers	
	Part B	1.5 kg containers	
	Part A+B	10.0 kg ready to mix units	
Appearance / Colour	Sikafloor®-305 W ESD is matt after final curing. Available in a limited number of colour shades such as RAL 1000, 1001, 1002, 1011, 3012, 5024, 6021, 6034, 7011, 7032, 7035, 7038, 7040, 7042, 7044, 7047, 9018. Be aware that the colour of the layer below has to be approximately adjusted to the colour of the Sikafloor®-305 W ESD.		
Shelf Life	Part A: 7 months from date of production Part B: 12 months from date of production		
Storage Conditions	The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.		
Density	Part A	~ 1.36 kg/l	(DIN EN ISO 2811-1)
	Part B	~ 1.15 kg/l	
	Mixed resin (diluted with 10% water)	~ 1.30 kg/l	
	All density values at +23 °C		

TECHNICAL INFORMATION

Abrasion Resistance	~ 119 mg (CS10/1000/1000)	(DIN 53 109 (Taber Abraser Test))
Chemical Resistance	Resistant to many chemicals. Contact Sika Technical Services for specific information.	
Electrostatic Behaviour	Resistance to ground ¹⁾	$R_g < 10^9 \Omega$ (IEC 61340-4-1)
	Typical average resistance to ground ²⁾	$R_g \leq 10^5 - 10^6 \Omega$ (DIN EN 1081)
	Body voltage generation ²⁾	< 100 V (IEC 61340-4-5)
	System Resistance (Person/Floor/Shoe) ³⁾	< 35 M Ω (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.

³⁾ Or < 10⁹ Ω + body voltage generation of < 100 V, in case of readings > 35 M Ω .

SYSTEM INFORMATION

Systems

Please refer to the System Data Sheets of:

Sikafloor® Multidur ES-43 ESD	Smooth, unicolour conductive epoxy floor covering with polyurethane ESD Roller Coating
Sikafloor® Multidur ES-46 ESD	Smooth, unicolour epoxy floor covering with polyurethane ESD Roller Coating
Sikafloor® Multiflex PS-27 ESD	Smooth, unicolour floor covering with ESD Roller Coating
Sikafloor® Multiflex PS-32 ESD	Smooth, unicolour, low VOC Polyurethane floor system with ESD Roller Coating
Sikagard® WallCoat WS-11 ESD	Smooth, water based, low VOC, wall coating system with ESD Roller Coating

APPLICATION INFORMATION

Mixing Ratio

Part A : Part B + H₂O = 85 : 15 : 10 (by weight)

Consumption

~0.18–0.20 kg/m²/layer

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage, etc. When used in high wear conditions, for example where rolling office chairs occur, a double layer Sikafloor®-305 W ESD is highly advisable, as a double layer is increasing the mechanical strength of the system and its resistance against office chair wheels particularly.

Lower consumption can cause roller marks, gloss differences and irregular surface structure, higher consumption result in water retention and can cause pigment floating as well as unsatisfactory conductivity.

Ambient Air Temperature

+10 °C minimum / +30 °C maximum

Relative Air Humidity

During curing, the humidity should not exceed a maximum level of 75 %. 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 the dew point to reduce the risk of condensation or blooming on the floor finish.

Substrate Temperature

+10 °C minimum / +30 °C maximum

Pot Life

Temperatures

+10 °C

+20 °C

+30 °C

Time

~ 50 minutes

~ 40 minutes

~ 20 minutes

Caution: The end of the pot-life is not noticeable; the viscosity will increase only slightly!

Curing Time

Before overcoating Sikafloor®-305 W ESD allow:

Substrate temperature	Minimum	Maximum
+10 °C	2 days	10 days
+20 °C	1 day	8 days
+30 °C	16 hours	7 days

Based on a maximum RH of 70 % and good ventilation. 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	~ 5 days	~ 10 days
+20 °C	~ 24 hours	~ 3 days	~ 8 days
+30 °C	~ 16 hours	~ 2 days	~ 7 days

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

VALUE BASE

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 DOCUMENTS

Substrate Quality and Preparation

Please refer to Sika Method Statement: "EVALUATION AND PREPARATION OF SURFACES FOR FLOORING SYSTEMS".

Application Instructions

Please refer to Sika Method Statement: "MIXING & APPLICATION OF FLOORING SYSTEMS".

LIMITATIONS

- Freshly applied Sikafloor®-305 W ESD must be protected from damp, condensation and water for at least 24 hours.
- This product may only be used by experienced professionals.
- Do not apply Sikafloor®-305 W ESD un-diluted. Please always dilute the material with 10 % water.
- Apply Sikafloor®-305 W ESD only to tack-free Epoxy or PUR resin.
- Ensure adequate ventilation during application and drying (especially at temperatures <13 °C), otherwise the reaction and drying processes may be impaired.
- It is extremely important to apply the coating at a consumption of 0.18–0.2 kg/m²/layer in order to achieve proper appearance, texture, colour development, and consistent ESD properties.
- If the floor is exposed to mechanical and / or chemical loads, the conductivity must be controlled regularly. In case of wear and tear, Sikafloor®-305 W ESD must be refreshed. This must be coordinated with the authorised ESD-representative or comparable.
- Please take care that the material will be mixed and stirred properly for three minutes as described in the paragraph Mixing Time. Incorrect / insufficient mixing can lead to colour differences.
- 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, only use 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 Sikafloor®-305 W ESD in each area is applied from the same batch. Please control batch numbers.
- Please note: ESD clothing, ambient conditions, measurement equipment, cleanliness of the floor and the

test person have a substantial influence on measurement results.

- Tyres might generate dark marks on Sikafloor®-305 W ESD because of plasticiser migration.
- In case of increased demands on the cleanability, Sikafloor®-305 W ESD can be overcoated with the static dissipative floor polish "Jontec ESD" or "Jontec Destat" from Diversey Care. Please refer to the cleaning regime of Sikafloor®-305 W ESD.

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.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type wb) is 140 g/l (Limit 2010) for the ready to use product.

The maximum content of Sikafloor®-305 W ESD is <140 g/l VOC for the ready to use product.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The surface must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by vacuum. Pull off strength shall not be less than 1.5 N/mm². If in doubt, apply a test area first. Epoxy surfaces must be sanded e.g. with a 3M™ Brown Stripper Pad in combination with low speed automatic scrubbers or rotary floor machines (175 – 600 rpm) in order to ensure adequate adhesion of Sikafloor®-305 W ESD.

MIXING

Prior to mixing, stir Part A mechanically. When all of Part B has been added to Part A, mix continuously for 3 minutes until a uniform mix has been achieved. In order to achieve smoother surface 10 % water must be added. After adding the water, mix continuously for 1 minute. Wait 1 minute and then mix it up again for a further 1 minute. The addition of water must be the same in every mix; if not, it could slightly influence the mattness and the texture. To ensure thorough mixing, pour materials into another container and mix

again to achieve a consistent mix. Over-mixing must be avoided to minimise air entrainment.

Mixing Tools:

Sikafloor®-305 W ESD must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

APPLICATION

Prior to application, confirm relative air humidity and dew point.

The floor must be divided into sections (at expansion joints or doorways where possible) that can be completed without stopping. Short pile (12 - 13 mm) nylon roller and trays are preferred tools.

The application must be carried out in 3 steps:

One worker has the task of applying the material in the corners, around columns or other installations using an appropriate brush. He has to take care to always have a "wet" edge maintained during application.

The second worker is responsible for distributing the material crosswise by roller in the correct consumption. He also has to take care that a "wet" edge is always maintained during application.

The third worker, equipped with spiked shoes with blunt spikes, has to enter the freshly applied area. He has the task of the final distribution of the material by roller. This must be done always parallel to his movement, "out of the area", in order to achieve a seamless finish.

It is mandatory to work evenly in order to avoid late re-rolling to adjacent, previously applied material which might be already dry. A seamless finish can be achieved if a "wet" edge is maintained during application.

Please refer to the Method Statement: "MIXING & APPLICATION OF FLOORING SYSTEMS".

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened and / or cured material can only be removed mechanically.

MAINTENANCE

To maintain the appearance of the floor after application, Sikafloor®-305 W ESD must have all spillages removed immediately and be regularly cleaned. Please refer to the "Sikafloor®- CLEANING REGIME".

LOCAL RESTRICTIONS

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Product Data Sheet

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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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