



BUILDING TRUST



# PRODUCT DATA SHEET

## Sikafloor®-278 ESD

Epoxy coloured electrostatic dissipative floor coating (Formerly FLORGARD ESD 500)

### DESCRIPTION

Sikafloor®-278 ESD is a two part, water dispersed, coloured, electrostatic dissipative epoxy resin floor coating.

### USES

Sikafloor®-278 ESD may only be used by experienced professionals.

- Refurbishment or maintenance coat on existing dissipative flooring system.
- Particularly suitable for areas with requirements for the lowest electrostatic charge (low Body Voltage Generation) and dissipative surface.
- Typical applications include clean rooms in the electronics industry, microbiology / microchemistry sectors, production plants in the automobile industry etc.

### CHARACTERISTICS / ADVANTAGES

- Meets the requirements of ASTM F150
- Body voltage generation < 100 V
- Low VOC emissions
- Low odour during application
- Very good mechanical resistance
- Easy application
- Easy to clean
- Gloss finish

### PRODUCT INFORMATION

<b>Composition</b>	Epoxy resin with conductive fillers	
<b>Packaging</b>	Part A+B pre-batched	7.5 kg set
	Part A (Coloured resin)	6.0 kg
	Part B (Hardener)	1.5 kg
<b>Shelf life</b>	6 months from date of production	
<b>Storage conditions</b>	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +30 °C.	
<b>Appearance and colour</b>	Part A	Coloured, liquid
	Part B	Transparent, liquid

Product is available in selected colour shades. Please consult with Sika representative for more details.

**IMPORTANT**

Applied colours selected from colour charts will be approximate.

**IMPORTANT**

For colour matching: Apply colour sample and confirm selected colour un-

der real lighting conditions.

**IMPORTANT**

Colour uniformity cannot be completely guaranteed from batch to batch. Do not mix batch numbers in a single area.

**IMPORTANT**

When product is exposed to direct UV exposure (sun, lamp, skylight, etc.), there may be some discolouration and colour variation, this has no influence on the function and performance of the floor finish. Use of clear UV resistant top coat may not prevent discoloration of underlying coatings.

**IMPORTANT**

Different mixing time of each set will lead to shade variations.

## TECHNICAL INFORMATION

Shore D Hardness	~75 (28 d, +27 °C)	(ASTM D2240)
Abrasion resistance	~40 mg (7 d, +27 °C, CS-10/1000/1000)	(ASTM D4060)
Compressive strength	~85 N/mm <sup>2</sup> (28 d, +27 °C)	(EN 196-1)
Tensile strength in flexure	~40 N/mm <sup>2</sup> (28 d, +27 °C)	(EN 196-1)
Tensile adhesion strength	~2 N/mm <sup>2</sup> (28 d, +27 °C, concrete failure)	(EN 1542)
Electrostatic behaviour	Typical average resistance to ground <sup>1</sup>	< 10 <sup>9</sup> Ω (IEC 61340-4-1)
	Body voltage generation	< 100 V (IEC 61340-4-5)

**NOTE:**

<sup>1</sup> Readings may vary, depending on ambient conditions (i.e. temperature, humidity), measurement equipment, cleanliness of the floor and the test person.

All measurement values for the Sikafloor®-278 ESD system stated in the product data sheet were measured under the following conditions: Ambient conditions: +23 °C/50 %; Measurement device for the Resistance to Ground: Metriso 2000 (Warmbier) or comparable.

Chemical resistance	Resistant to many chemicals. Contact Sika Technical Services for specific information.
---------------------	--

## SYSTEM INFORMATION

System structure	<b>Layer</b>	<b>Product</b>
	Conductive Primer	Sikafloor®-223 W Conductive
	ESD top coat	Sikafloor®-278 ESD

## APPLICATION INFORMATION

Mixing ratio	Part A : Part B = 6.0 : 1.5		
Consumption	<b>Layer</b>	<b>Product</b>	<b>Consumption</b>
	Conductive Primer	Sikafloor®-223 W Conductive	0.12 kg/m <sup>2</sup>
	ESD Top coat	Sikafloor®-278 ESD	0.8 kg/m <sup>2</sup>
	These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.		
Layer thickness	0.5 mm max. <b>IMPORTANT</b> Excessive thickness > 0.5 mm (consumption > 0.8 kg/m <sup>2</sup> ) will cause reduced conductivity.		
Ambient air temperature	+10 °C min. / +35 °C max.		

<b>Relative air humidity</b>	80 % max.			
<b>Dew point</b>	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. Low temperatures and high humidity conditions increase the probability of blooming.			
<b>Substrate temperature</b>	+10 °C min. / +35 °C max.			
<b>Substrate moisture content</b>	≤ 4 % parts by weight The following test methods can be used: Sika®-Tramex meter, CM-measurement or Oven-dry-method. No rising moisture according to ASTM D4263 (Polyethylene-sheet).			
<b>Pot Life</b>	<b>Temperatures</b>	<b>Pot life (100 g mass)</b>		
	+20 °C	~ 25 minutes		
	+30 °C	~ 15 minutes		
<b>Applied product ready for use</b>	<b>Temperature</b>	<b>Foot traffic</b>	<b>Light traffic</b>	<b>Full cure</b>
	+20 °C	~ 24 hours	~ 3 days	~ 7 days
	+30 °C	~ 18 hours	~ 2 days	~ 5 days
Note: Times are approximate and will be affected by changing ambient and substrate conditions, particularly temperature and relative humidity.				

## 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

- Sika Method Statement — Sikafloor® evaluation and preparation of surfaces
- Sika Method Statement — Sikafloor® mixing and application

## 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.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

#### MIXING EQUIPMENT

- Electric single paddle mixer (300 to 400 rpm)

#### APPLICATION EQUIPMENT

- Flat, round edge steel trowel
- Spiked roller
- Trowels, including serrated
- Pin leveller

### SUBSTRATE QUALITY

#### IMPORTANT

#### Incorrect treatment of cracks

The incorrect assessment and treatment of cracks may

lead to a reduced service life and reflective cracking. Construction joints and existing static surface cracks in substrate require pre-treating before full layer application. Use Sikadur® or Sikafloor® resins.

- Cementitious substrates (concrete / screed) must be structurally sound and of sufficient compressive strength (minimum 25 N/mm<sup>2</sup>) with a minimum tensile strength of 1.5 N/mm<sup>2</sup>.
- Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

### SUBSTRATE PREPARATION

- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.
- Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface levelling can be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials.
- The concrete or screed substrate has to be primed or levelled in order to achieve an even surface. Note: Unevenness will influence the film thickness and thus the conductivity.
- High spots must be removed by e.g. grinding.
- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

### MIXING

1. Mix Part A (resin) until the coloured pigment is dispersed and a uniform colour is achieved.
2. Add Part B (hardener) to Part A.
3. IMPORTANT Do not mix excessively. Mix Part A + B continuously for ~3 minutes until a uniformly col-

- oured mix is achieved.
- To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
  - During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

## APPLICATION

### IMPORTANT

#### Temporary heating

If temporary heating is required, do not use gas, oil, paraffin or other fossil fuel heaters. These produce large quantities of both carbon dioxide and water vapour, which may adversely affect the finish.

- For heating, use only electric powered warm air blower systems.

### IMPORTANT

#### Performing pre-trials

Pre-trials/mock-up applications must be performed and procedures agreed with all parties before full project application.

### IMPORTANT

#### Temporary moisture barrier

If the substrate moisture content measured with the CM-method is > 4 % by weight, apply a temporary moisture barrier consisting of Sikafloor® EpoCem®.

- Contact Sika technical services for more information.

### IMPORTANT

#### Indentations

Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading may lead to indentations in the resin.

## SMOOTH WEARING LAYER

- Pour the mixed Product onto the substrate. **Note:** The consumption is specified in Application Information.
- Apply the Product evenly over the surface with a serrated trowel.
- To achieve a smooth finish, smooth the surface with the flat side of a trowel.
- Back roll the surface in two directions at right angles with a steel spike roller.

## CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be removed mechanically.

## 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 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.

**Apurva India Pvt. Ltd.**  
New Udyog Mandir No. 2,  
Office No. 203, 2nd Floor,  
7-C, Pitamber Lane, Mahim (West)  
Mumbai - 400 016  
Maharashtra, India

**Contact:**  
Phone: +91 22 6270 4038  
info.india@in.sika.com  
www.apurvaindia.in  
www.sika.in