BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-1230 ESD

(formerly MTop 1230ESD)

Four component electrostatic dissipative epoxy self smoothening floor topping

DESCRIPTION

Sikafloor®-1230 ESDnis a 4-part, self smoothing, solvent free, coloured electrostatic dissipative epoxy resin floor coating.

USES

Sikafloor®-1230 ESD is designed for use ascoating for medium duty industrial floors in areas where a smooth and ESD (IEC 61340-5-1) surface is required: for example, electronic industry, cleanrooms, pharmaceutical and space industry etc.

CHARACTERISTICS / ADVANTAGES

- High resistance to chemicals
- Exhibits excellent mechanical strength and antistatic properties
- Abrasion resistant
- Good adhesion to non-porous substrates
- Easy to clean and maintain
- Easy to apply
- Extremely resistant to a variety of alkalis, diluted acids, brine, mineral oils, lubricants and fuels

PRODUCT INFORMATION

Chemical base	Epoxy	
Packaging	Part A:	5.0 kg container
	Part B:	3.25kg container
	Part C:	8.0 kg bag
	Part D:	0.45 kg container
	Part A + B + C + D:	16.7kg set
Shelf life	12 months	
Storage conditions	Stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +15°C and +25°C.	
Appearance / Colour	Part A:	liquid, transparent resin
	Part B:	liquid,Light brown, Hardener
	Part C:	powder, white
	Part D:	Colour paste
	Sikafloor®-1230 ESD is available in a range of colors,please inquire Sika.	
Density	Mixed 1.5kg/l at 23°C	
Solid content by weight	~100%	
Solid content by volume	~100%	

Compressive strength	≥ 70 MPa 7d	(ISO 604)
Flexural strength	28 MPa at 7D	(ISO 178)
Tensile strength	13 MPa at 7D	(ISO 527)
Tensile adhesion strength	≥ 2.0 MPa (Concrete failure)	EN 1542

Electrostatic behaviour

Resistance (Resistance to ground or Surface resistance)	<1X10⁹Ω	ICE-61340-5-1 Test voltage: 100V
Person-foot wear- flooring system	<1X10⁹Ω	ICE-61340-5-1
Walking test	<100V	ICE-61340-5-1

The above figures are intended as a guide only and should not be used as a basis for specifications.

Chemical resistance

Resistant to many chemicals. Please ask for a detailed chemical resistance table.

SYSTEM INFORMATION

Systems

Self-smoothing system ca. 1.5 mm – gloss finish:

Coating System	Product
Primer:	1 x Sikafloor®-161 HC
Earthing connection:	Earthing Kit/ copper tape
Conductive coat:	1 x Sikafloor®-220 W Conductive
Condctive topcoat:	1 x Sikafloor®-1230 ESD

APPLICATION INFORMATION

Mixing ratio

Part A : part B : Part C : Part D = 5.0 : 3.25 : 8.0 : 0.45 (Mix full unit only)

Consumption

Self-smoothing system(Film thickness ~ 1.5 mm)	Product	Consumption
Primer:	1 x Sikafloor®-161 HC	0.35 - 0.55 kg/m²
Earthing connection:	Earthing Kit/Copper tape	
Conductive coat:	1 x Sikafloor®-220 W Conductive	0.08 - 0.1 kg/m²
Condctive topcoat:	1 x Sikafloor®-1230 ESD	2.5 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

+15 °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

+15 °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).

Pot life

Temperature	Time
+20 °C	~ 30 minutes

Applied product ready for use	Temperature	Full cure	ready for exposure to chemicals
	+23 °C	~ 7 days	~ 7 days

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

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.

IMPORTANT CONSIDERATIONS

- This product may only be used by experienced professionals.
- Do not apply Sikafloor®-1230 ESD on substrates in which significant vapour pressure may occur.
- Do not blind the primer.
- Freshly applied Sikafloor®-1230 ESD must be protected from damp, condensation and water for at least 24 hours.
- Avoid puddles on the surface with the primer.
- Only start application of Sikafloor® conductive coat 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.
- Before the application of a conductive flooring system, a reference area has to be applied. This reference area must be assessed and accepted from the contractor/client. The desired result and method of conductivity measurement must be stated in the Specification and Method Statement. The number of conductivity measurements is strongly recommended to be as shown in the table below:

Applied floor area	Number of measurements
< 10 m²	1 measurement / m²
10-100 m²	10 - 20 measurements
> 100 m²	10 measurements / 100 m²

The measuring points must have a distance of at least 50 cm to the next measuring point. In case of a measurement lower/higher than required, an additional measurement has to be carried out within 50 cm of the point with the insufficient result.
Placing of earthing points:
If the Sikafloor®-Earthing Kit conductor system (system of anchored brass-plates with stable earth connection) is applied, the instructions for use have to be followed exactly. Every earthing point is able to conduct approx. 300 m². Ensure the longest distance of each point in the area is max. 10 m to the next earthing point. Clean the earthing spots carefully. For longer distances, additional earthing points have to be placed. If site conditions do not allow placing of additional earthing points, longer distances (>10 m) have to be bridged with copper tapes. The earthing spots have to be connected to the ring-mains. This work must be executed and approved by an electrical engineer and in accordance with any relevant regulations.
Numbers of earth connections:
Per room al least 2 earthing points. The optimum number of earth connections depends on the local conditions and should be specified with documents.

- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking - reducing or breaking conductivity.

Please note:
According to experience the selection of the clothing, such as ESD footwear and socks, weight of the test person, the ambient conditions, the probe and the cleanliness of the floor, has substantial influence on the results of measurement.

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.

EQUIPMENT

Sikafloor®-1230 ESD must be thoroughly mixed using a low speed electric stirrer (~300 rpm) or other suitable equipment.

SUBSTRATE QUALITY / PRE-TREATMENT

- Concrete substrates must be sound and of sufficient compressive strength (minimum 30 MPa) with a minimum pull off strength of 1.5 MPa.
- The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.
- If in doubt, apply a test area first.
- 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. 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 com-

pletely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

MIXING

Sikafloor®-1230 ESD is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, precon-dition both A,B, C & D components to a temperature of ap-proximately 15 to 25°C. Mixing Part A firstly & then add D(Colour paste) & finally add C (Powder) & mix for 3 minutes. Pour the entire contents into the another container & mix for 30 seconds. Do not mix by hand.
Mix with a mechanical drill and paddle at a low speed (ca.300rpm) for at least 3 minutes. Scrape the sides and the bottom of the container several times to ensure com-plete mixing. Keep the mixer blades submerged in the coating to avoid introducing air bubbles. Do not work out of the original container. After proper mixing to a homogene-ous consistency pour the mixed Parts A and B into a fresh container and mix for another minute.

APPLICATION

- 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

Note: To ensure a uniform color, use only products from the same lot number.

CLEANING OF TOOLS

Clean all tools with Thinner® C immediately after use. Hardened and/or cured material can only be mechanically removed.

MAINTENANCE

CLEANING

To maintain the appearance of the floor after application, Sikafloor®-1230 ESD must have all spillages removed immediately and must be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc. using suitable detergents and waxes.
For further information regarding the cleaning of Sikafloor®-1230 ESD please refer to the “Sikafloor®-CLEANING REGIME”.

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.

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