BUILDING TRUST

SYSTEM DATA SHEET

Sikafloor® PurCem® HS-25 ECF

POLYURETHANE HYBRID FLOW APPLIED HEAVY DUTY CONDUCTIVE FLOORING SYSTEM

PRODUCT DESCRIPTION

Sikafloor® PurCem® HS-25 ECF is a polyurethane hybrid, heavy duty conductive flooring system. The flooring system in association with employee's anti-static clothing and footwear is designed to reduce the risk of an electrostatic discharge igniting an explosive atmosphere.

USES

Sikafloor® PurCem® HS-25 ECF installation works to be carried out only by Sika Approved Contractors. Please observe information given by Product Data Sheets.

- Chemical, explosive storage and handling areas
- Chemical and pharmaceutical production plants
- Food processing plants
- In dry or wet process areas
- Freezers and coolers
- Thermal shock areas
- Explosive dust environments
- Workshops and laboratories
- For Interior use only

CHARACTERISTICS / ADVANTAGES

- Thickness ~6.0 mm
- Good conductivity. Fulfils the conductivity requirements from ATEX 137
- Good chemical, abrasion, impact and thermal resistance
- Tolerant to substrates with high moisture content
- Smooth-textured, slightly undulating surface, matt finish.
- Seamless
- Easy to apply
- Easy cleanability
- Low maintenance

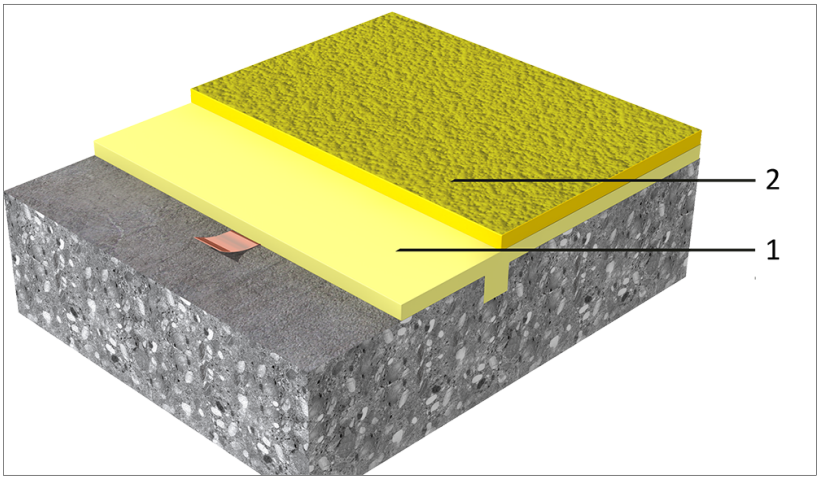
APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating
- CE Marking and Declaration of Performance to EN 13813 - Resin screed material for internal use in buildings
- Electrical Resistance, Sikafloor® PurCem® HS-25 ECF, LCIE, Report, No. 144937-693914-A
- Fire Testing, EN 13501-1, Sikafloor®-25 PurCem® ECF, Exova, Approval, No. 318327
- Sanitary Compliance EN 1186, EN 13130, CEN/TS 144234, Sikafloor®-25 PurCem®, ISEGA, Certificate No.49109 U

SYSTEM INFORMATION

System Structure

Sikafloor® PurCem® HS-25 ECF:



1. Earthing + Conductive scratch coat	Sika® Earthing Kit + Sikafloor®-25 S PurCem® ECF
2. Conductive wearing finish	Sikafloor®-25 PurCem® ECF

Optional primers: Sikafloor®-150/-151 + quartz sand 0.3–0.8 mm broadcast to excess. Refer to the individual Product Data Sheets.
The system structure layers as described in table must not be changed.

Composition

Water-based polyurethane cement hybrid

Appearance

Smooth-textured, slightly undulating surface, matt finish.

Colour

Beige, Oxide Red, Grass Green, Pebble Grey, Light Grey, Dusty Grey, Agate Grey.

Nominal Thickness

~6 mm

TECHNICAL INFORMATION

Abrasion Resistance	< 900 mg	(H-22/1000/1000)	(ASTM D 4060-01)
Resistance to Impact	Class III	(≥ 20Nm)	(ISO 6272)
Compressive Strength	> 50 N/mm²		(DIN EN 13892-2)
Tensile Strength	> 15 N/mm²		(DIN EN13892-2)
Tensile Adhesion Strength	>1.5 N/mm² (failure in concrete)		(ISO 4624)
Reaction to Fire	B_{fl}-s1		(EN 13501-1)
Chemical Resistance	Resistant to many chemicals. Contact Sika Technical Service for specific information.		
Thermal Resistance	The product (6 mm thickness) is suitable for use when exposed to continuous temperatures, wet or dry, of up to +90 °C. The minimum service temperature is -40 °C.		
Skid / Slip Resistance	R 10		(DIN 51130)
Electrostatic Behaviour	Resistance to ground[1]	$R_g < 10^9$ Ω	(IEC 61340-4-1)
	Typical average resistance to ground[2]	$R_g < 10^6$ – 10^8 Ω	(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.

All measurement values for the Sikafloor® PurCem® HS-25 ECF 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

APPLICATION INFORMATION

Consumption

Flooring System	Product	Consumption
Primer + Sand broadcast (optional)	Sikafloor®-150/-151 + quartz sand 0.3–0.8 mm broadcast to excess	1–2 × ~0.3–0.5 kg/m²
1. Earthing connection	Sika® Earthing Kit	1 earthing point per approx. 200–300 m², min. 2 per room.
Conductive scratch coat	Sikafloor®-25S PurCem® ECF	~1.81 kg/m²/mm (1 × ~3.0kg/m²)
2. Conductive Wearing Finish	Sikafloor®-25 PurCem® ECF	~1.89 kg/m²/mm (1 × ~9.0 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.

Product Temperature

+15 °C min. / +25 °C max.

Ambient Air Temperature

+15 °C min. / +25 °C max.

Relative Air Humidity

80 % max

Dew Point

Beware of condensation.
The substrate and uncured applied floor material 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. / +25 °C max.

Substrate Moisture Content

Can be installed on substrates with high moisture contents (≤6 % measured by Sika®-Tramex meter). The substrate must be visibly dry with no standing water and have a tensile strength of ≥1,5 N/mm². Do not apply if rising moisture is occurring. If an epoxy resin primer is used, refer to the individual Product Data Sheet for the substrate moisture content limits.

Waiting Time / Overcoating

(Optional) Before applying Sikafloor®-25S PurCem® ECF on broadcast Sikafloor®-150/151 allow:

Substrate temperature	Minimum	Maximum
+15 °C	24 hours	4 days
+20 °C	12 hours	2 days
+30 °C	8 hours	1 days

Always ensure primer is fully cured before application.
Before applying Sikafloor®-25 PurCem® ECF on Sikafloor®-25S PurCem® ECF allow:

Substrate temperature	Minimum	Maximum
+15 °C	36 hours	72 hours
+20 °C	24 hours	48 hours
+30 °C	12 hours	24 hours

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

Applied Product Ready for Use

Temperature	Foot traffic	Light traffic	Full cure
+10 °C	~20 hours	~34 hours	~7 days
+20 °C	~12 hours	~16 hours	~4 days
+30 °C	~8 hours	~14 hours	~3-4 days

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

Additional Information

The number of conductivity measurements is recommended in the table below:

Applied area	Number of measurements
< 10 m²	6
< 100 m²	10–20
< 1000 m²	0
< 5000 m²	100

If values are lower/higher than required, additional measurements must be carried out, ~30 cm around the point where the faulty readings are located. If the re-measured values are in accordance with the requirements, the total area is acceptable.
Installation of earthing points: Refer to Sika® Method Statement: Mixing & Applications of Flooring Systems.
Numbers of earth connections per room: Minimum of 2 earthing points. The optimum number of earth connections depends on the local conditions and must be specified on available drawings or other contract documentation.

PRODUCT INFORMATION

Packaging	Refer to individual Product Data Sheet.
Shelf Life	Refer to individual Product Data Sheet.
Storage Conditions	Refer to individual Product Data Sheet.

MAINTENANCE

To maintain the appearance of the floor after application, Sikafloor® PurCem® HS-25 ECF 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.

CLEANING

Refer to Information Manual: Sikafloor®-Cleaning Regime

FURTHER DOCUMENTS

- Sika Information Manual: Sikafloor®-Cleaning Regime
- Sika Information Manual: Mixing and Application of Flooring Systems
- Sika Information Manual: Evaluation and Preparation of Surfaces for Flooring Systems
- Individual Product Data Sheets within the flooring system

LIMITATIONS

- In addition to the Sikafloor® PurCem® HS-25 ECF flooring system, consideration must be given to providing employees working in an explosive atmosphere zoned area with anti-static clothing and footwear.
- After application, all the products must be protected from damp, condensation and water for at least 24 hours.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.
- Construction joints and existing static surface cracks require pre-treating with a stripe coat by prefilling and levelling to seal against loss of material through the joint or cracks before full layer application. Use Sikadur® or Sikafloor® resins.
- If temporary 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.
- Retaining grooves must be placed at exposed edges along of the application area (perimeter, joints, connections, plinths, columns, covings and drains / gul-

lies) as indicated in the Method Statement application details. The grooves prevent curling during curing. Width and depth must be twice the thickness of the floor finish.
- Always ensure good ventilation when using in a confined space, to prevent excessive ambient humidity.
- For consistent colour matching, ensure the wearing finish in each area is applied from the same control batch numbers.
- Sikafloor® PurCem® HS-25 ECF shares the resin (part A) and hardener (part B) with other Sikafloor®-PurCem® products. Ensure the correct pack sizes of Part C (aggregate) are used.
- For consistent results it is advised to always use the scratch coat before placing Sikafloor® PurCem® HS-25 ECF on any substrate.
- Protect the substrate and system products during application from pipe condensation or any overhead leaks.
- Always allow a minimum of 48 hours after product application prior to placing food products onto the same floor area.
- In some slow curing conditions, soiling of the surface may occur when opened to foot traffic, even though mechanical properties have been achieved. It is advised to remove dirt using a dry mop or cloth. Avoid scrubbing with water for the first 3 days.
- Hot steam cleaning may lead to delamination due to thermal shock.
- Do not apply to cracked or unsound substrates.
- Do not featheredge.
- Do not apply to wet or green concrete or polymer modified repair patches if the moisture content is above 10 %.
- Do not apply to PCC (polymer modified cement mortars) that may expand when sealed with an impervious resin.
- Do not apply to water soaked, glistening wet concrete substrates.
- Do not apply to porous surfaces where significant moisture vapour transmission (out-gassing) will occur during application.
- Do not apply to un-reinforced sand cement screeds, asphaltic or bituminous substrates, glazed or unglazed tiles. Magnesite, copper, aluminium, wood or urethane compositions, elastomeric membranes or fibre reinforced plastic (FRP) composites.
- Do not apply on substrates with rising moisture.

VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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 the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

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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