

## SYSTEM DATA SHEET

# Sikafloor® PurCem® HS-25 ECF

POLYURETHANE HYBRID FLOW APPLIED HEAVY DUTY CONDUCTIVE FLOORING SYSTEM



## 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 may only be used by experienced professionals.

- 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

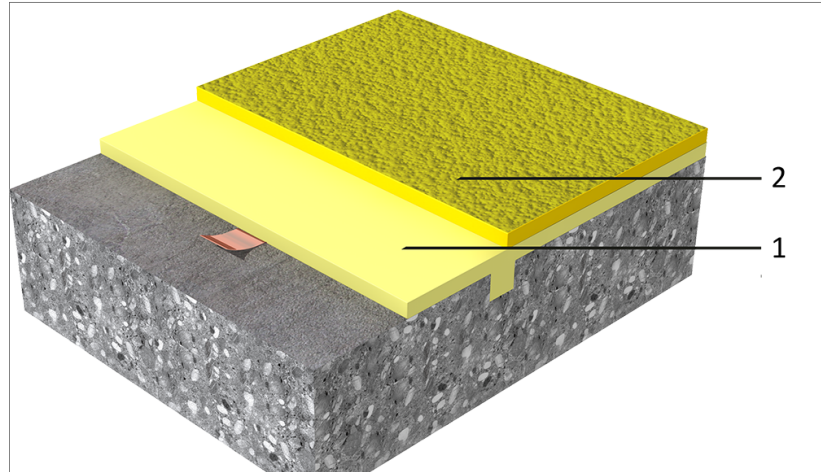
## APPROVALS / CERTIFICATES

- 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

# SYSTEMS

## 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®-156/-161 + quartz sand 0,4–0,8 mm broadcast to excess. Refer to the individual Product Data Sheets.

The system structure layers as described in table must not be changed.

<b>Composition</b>	Water-based polyurethane cement hybrid
<b>Appearance</b>	Smooth-textured, slightly undulating surface, matt finish.
<b>Colour</b>	Beige, Oxide Red, Grass Green, Pebble Grey, Light Grey, Dusty Grey, Agate Grey.
<b>Nominal Thickness</b>	~6 mm

## TECHNICAL INFORMATION

<b>Abrasion Resistance</b>	< 900 mg	(H-22/1000/1000)	(ASTM D 4060-01)
<b>Resistance to Impact</b>	Class III	(≥ 20Nm)	(ISO 6272)
<b>Compressive Strength</b>	> 50 N/mm <sup>2</sup>		(DIN EN 13892-2)
<b>Tensile Strength</b>	> 15 N/mm <sup>2</sup>		(DIN EN13892-2)
<b>Tensile Adhesion Strength</b>	>1,5 N/mm <sup>2</sup> (failure in concrete)		(ISO 4624)
<b>Reaction to Fire</b>	B <sub>fl</sub> -s1		(EN 13501-1)
<b>Chemical Resistance</b>	Resistant to many chemicals. Contact Sika Technical Service for specific information.		
<b>Temperature Resistance</b>	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.		
<b>Skid / Slip Resistance</b>	R 10		(DIN 51130)
<b>Electrostatic Behaviour</b>	Resistance to ground <sup>1</sup>	$R_g < 10^9 \Omega$	(IEC 61340-4-1)
	Typical average resistance to ground <sup>2</sup>	$R_g < 10^6 - 10^8 \Omega$	(DIN EN 1081)

<sup>1</sup> In accordance with IEC 61340-5-1 and ANSI/ESD S20.20.

<sup>2</sup> Readings may vary, depending on ambient conditions (i.e. temperature, humidity) and measurement equipment.

## APPLICATION INFORMATION

Consumption	Flooring System	Product	Consumption
	Primer + Sand broadcast (optional)	Sikafloor®-156/-161 + quartz sand 0.4–0.8 mm broadcast to excess	1–2 × ~0,3–0,5 kg/m <sup>2</sup>
	1. Earthing connection	Sika® Earthing Kit	1 earthing point per approx. 200–300 m <sup>2</sup> , min. 2 per room.
	Conductive scratch coat	Sikafloor®-25S PurCem® ECF	~1,81 kg/m <sup>2</sup> /mm (1 × ~3,0kg/m <sup>2</sup> )
	2. Conductive Wearing Finish	Sikafloor®-25 PurCem® ECF	~1,89 kg/m <sup>2</sup> /mm (1 × ~9,0 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 or wastage etc.

<b>Product Temperature</b>	+15 °C min. / +25 °C max.
<b>Ambient Air Temperature</b>	+15 °C min. / +25 °C max.
<b>Relative Air Humidity</b>	80 % max
<b>Dew Point</b>	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.
<b>Substrate Temperature</b>	+15 °C min. / +25 °C max.
<b>Substrate Moisture Content</b>	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/mm <sup>2</sup> . 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.

<b>Waiting Time / Overcoating</b>	(Optional) Before applying Sikafloor®-25S PurCem® ECF on broadcast Sikafloor®-156/161 allow:		
	<b>Substrate temperature</b>	<b>Minimum</b>	<b>Maximum</b>
	+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:

	<b>Substrate temperature</b>	<b>Minimum</b>	<b>Maximum</b>
	+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 by changing ambient and substrate conditions, particularly temperature and relative humidity.

<b>Applied Product Ready for Use</b>	<b>Temperature</b>	<b>Foot traffic</b>	<b>Light traffic</b>	<b>Full cure</b>
	+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 m <sup>2</sup>	6
< 100 m <sup>2</sup>	10–20
< 1000 m <sup>2</sup>	0
< 5000 m <sup>2</sup>	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.

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## PRODUCT INFORMATION

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Packaging	Refer to individual Product Data Sheet.
Shelf life	Refer to individual Product Data Sheet.
Storage conditions	Refer to individual Product Data Sheet.

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## 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 Method Statement: Sikafloor®-Cleaning Regime

## FURTHER INFORMATION

- Sika Method Statement: Sikafloor®-Cleaning Regime
- Sika Method Statement: Sikafloor®-25 PurCem® ECF
- Sika Method Statement: Mixing and Application of Flooring Systems
- Sika Method Statement: Evaluation and Preparation of Surfaces for Flooring Systems
- Individual Product Data Sheets within the flooring system

## IMPORTANT CONSIDERATIONS

- 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<sub>2</sub> and H<sub>2</sub>O 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.

## 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.

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### System Data Sheet

Sikafloor® PurCem® HS-25 ECF  
May 2020, Version 07.01  
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## 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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