



BUILDING TRUST



PRODUCT DATA SHEET

Sikafloor®-44 PurCem® EDF

Self-smoothing high strength, chemical resistant, medium duty polyurethane hybrid dissipative flooring screed (Formerly FLORGIENE ESD SL)

DESCRIPTION

Sikafloor®-44 PurCem® EDF is a 4-part polyurethane hybrid medium duty, water based, coloured, matt finish, self-smoothing dissipative flooring screed. Thickness 2.0 mm. Indoor use. Provides a seamless, chemical, impact, heat, abrasion resistant, easy cleanable, low maintenance surface in dry process areas.

USES

Sikafloor®-44 PurCem® EDF 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 environment
- Workshops and laboratories

CHARACTERISTICS / ADVANTAGES

- Fulfils the requirements of ASTM F150
- Seamless
- Good chemical, abrasion, impact and thermal resistance
- Easy application
- Tolerant to substrates with high moisture content
- Smooth-textured, self-smoothing, matt finish
- Easy cleanability
- Low maintenance
- Solvent free
- Low odour

PRODUCT INFORMATION

Composition	Water-based polyurethane cement hybrid	
Packaging	Part A+B+C+D	18 kg set
	Part A	2.88 kg container
	Part B	3.0 kg container
	Part C	12.03 kg bag
	Part D	0.09 kg pouch

Shelf life	Part A	12 months from date of production. Protect from freezing.
	Part B	06 months from date of production. Protect from freezing.
	Part C	06 months from date of production. Protect from humidity.
	Part D	24 months from date of production. Protect from humidity.

Storage conditions The product must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +25 °C. Protect from direct sunlight.

Appearance and colour	Part A	White liquid
	Part B	Brown liquid
	Part C	Coloured powder
	Part D	Black fibres
	Cured finish	Smooth-textured, matt finish
	Cured appearance	Green, Grey, Light Grey, Yellow, Red, Blue

IMPORTANT

For colour matching: Apply colour sample and confirm selected colour under 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.

Density	~1.8 kg/L (Part A+B+C+D mixed, +27 °C)	(EN ISO 2811-1)
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TECHNICAL INFORMATION

Shore D Hardness	~80 (28 d, +27 °C)	(ASTM D2240)
Abrasion resistance	~40 mg (8 d, +27 °C, H22/1000/1000)	(ASTM D4060)
Compressive strength	~40 N/mm ² (28 d, +23 °C)	(ASTM C579)
Tensile strength in flexure	~14 N/mm ² (28 d, +23 °C)	(ASTM C580)
Tensile strength	~6 N/mm ² (28 d, +23 °C)	(ISO 527-3)
Tensile adhesion strength	~3 N/mm ² (28 d, concrete failure)	(EN 1542)
Electrostatic behaviour	Typical average resistance to ground ¹	10 ⁶ –10 ⁹ Ω (ASTM F150)

NOTE:

¹ Readings may vary, depending on ambient conditions (i.e. temperature, humidity) and measurement equipment.

All measurement values for the Sikafloor®-44 PurCem® EDF 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 additional information.
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SYSTEM INFORMATION

System structure	Layer	Product
	Primer	Sikafloor®-167 Primer / Sikafloor®-161 HC
	Levelling layer	Sikafloor®-296
	Earthing connection	Sikafloor® Copper Tape IN
	Conductive primer	Sikafloor®-223 W Conductive
	Self-smoothing	Sikafloor®-44 PurCem® EDF

APPLICATION INFORMATION

Mixing ratio Part A : Part B : Part C : Part D = 2.88 : 3 : 12.03 : 0.09

Consumption	Layer	Product	Consumption
	Primer	Sikafloor®-167 Primer / Sikafloor®-161 HC	0.2–0.3 kg/m ²
	Levelling screed	Sikafloor®-296 (0.5 mm)	0.8 kg/m ²
	Earthing connection	Sikafloor® Copper Tape IN	Consult with Sika representative
	Conductive under coat	Sikafloor®-223 W Conductive	0.10–0.12 kg/m ²
	Self-smoothing top coat	Sikafloor®-44 PurCem® EDF	3.9 kg/m ²

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.

Ambient air temperature +15 °C min. / +30 °C max.

Relative air humidity 80 % max.

Dew point Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Low temperatures and high humidity conditions increase the probability of blooming.

Substrate temperature +15 °C min. / +30 °C max.

Substrate moisture content Sikafloor®-44 PurCem® EDF can be installed on substrates with higher moisture content (< 6 % checked by Tramex). The substrate needs to be visibly dry and have an adequate pull-off strength min 1.5 N/mm². No ponding water. Check for rising moisture. If an epoxy resin as primer is used, please refer to the individual Product Data Sheet for the limits with regards to substrate moisture content.

Pot Life	Temperature	Pot life (100 g mass)
	+20 °C	~15–18 min
	+30 °C	~10–15 min

Applied product ready for use	Temperature	Foot traffic	Light traffic	Full cure
	+20 °C	18 h	24 h	4 days
	+30 °C	12 h	18 h	3-4 days

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

IMPORTANT

Dirt pick up in slow curing conditions

In some slow curing conditions, soiling of the surface may occur when opened to foot traffic, even though mechanical properties have been achieved.

1. Remove dirt using a dry mop or cloth.
2. Do not scrub the product with water for the first three days.

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: Evaluation and preparation of surfaces for flooring systems
- Sika Method Statement: Mixing & Application of Flooring Systems
- Sika Method Statement: Sikafloor® PurCem® EDF
- Relevant local and International standards on dissipative floors

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)
- Electric double paddle mixer (>700 W, 300 to 400 rpm)
- Forced action / rotating pan / double paddle or trough type mixer (300–400 rpm)

APPLICATION EQUIPMENT

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

SUBSTRATE QUALITY

- The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².
- The substrate must be clean, dry and free of all contaminants such as oil, grease, coatings and surface treatments, etc.

SUBSTRATE PREPARATION

IMPORTANT

Incorrect treatment of cracks

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment or diamond grinding machine to remove cement laitance and achieve an open textured surface.
- Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.
- Repairs to substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate

products from the Sikafloor®, Sikadur® and Sikagard® range of materials.

- High spots can be removed by 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.
- To prevent curling of the applied product during curing, place retaining grooves in the substrate along all exposed edges (perimeter, joints, connections, plinths, columns, coverings and drains / gullies) as shown in the application details of the Sika Method Statement: Sikafloor® PurCem®. Width and depth must be twice the thickness of the floor finish.

MIXING

IMPORTANT

Mix full units only

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. Mix Part A + B continuously for 30 seconds until a uniformly coloured mix is achieved.
4. Gradually add Part C and finally Part D while you continue mixing for 30 seconds.
5. After combining all parts, mix for an additional 2 minutes, until a uniform mix is achieved.
6. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
7. 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

Protecting the material after application

After application, protect the system from damp, condensation and direct water contact for at least 24 hours.

IMPORTANT

Protect from overhead leaks and condensation

Protect the product during application from pipe condensation or any overhead leaks.

IMPORTANT

Ventilation in confined spaces

Always ensure good ventilation when applying the product in a confined space.

IMPORTANT

Application on polymer modified cement mortars

Do not apply the product on polymer modified cement mortars if the mortar expands when sealed with an impervious resin.

IMPORTANT

Waiting time for foodstuff

Allow a minimum of 48 hours after application before placing foodstuff in the same area.

WEARING LAYER

1. Pour the mixed product onto the substrate. Note: The consumption is specified in Application Information.
2. Apply the product evenly over the surface with a pin leveller or a trowel.

3. Back roll the surface in two directions at right angles with a spike roller. Note: Maintain a "wet edge" during application to achieve a seamless finish.

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.

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