BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-390 ECF N

2-part chemical resistant electrostatically conductive floor covering

DESCRIPTION

Sikafloor®-390 ECF N is a 2-part, electrostatically conductive, self-smoothing epoxy resin with high chemical resistance. It is specially designed for surfaces in bunding areas for the protection against ground water contaminating liquids.

USES

Sikafloor®-390 ECF N may only be used by experienced professionals.

Sikafloor®-390 ECF N is used as a:

- Smooth electrostatically conductive floor covering

Sikafloor®-390 ECF N is used for interior and exterior applications.

FEATURES

- Accommodates substrate movement
- Electrostatically conductive
- Impermeable to liquids

CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance to EN 13813:2002 — Screed material and floor screeds — Synthetic resin screed material
- CE Marking and Declaration of Performance to EN 1504-2:2004 — Products and systems for the repair and protection of concrete structures — Part 2: Surface protection systems for concrete — Coating

PRODUCT INFORMATION

Packaging	Container Part A	20,75 kg
	Container Part B	4,25 kg
	Container Part A + Part B	25 kg ready to mix units
Shelf life	12 months from date of production	
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. Refer to current Safety Data Sheet for information on safe handling and storage.	
Appearance and colour	Part A	coloured, liquid
	Part B	yellowish, transparent
	Udseende efter hærdning	Glans finish
	Available in a wide range of colours. **Exposure to direct sunlight** Note: When the product is exposed to direct sunlight, there may be some discolouration and colour variation. This has no influence on the function and performance of the coating.	

Note: Colour deviations may occur due to filling with quartz sand or carbon fibre filaments.
Note: Due to the nature of carbon fibres providing the conductivity, surface irregularities might be possible. This has no influence on the function and performance of the coating.

Density

Part A	~1,66 kg/l	(EN ISO 2811-1)
Part B	~1,05 kg/l	
Mixed Product	~1,51 kg/l	

Solid content by mass

100 %

Solid content by volume

100 %

TECHNICAL INFORMATION

Shore D Hardness

~50 (after 7 days at +23 °C) (EN ISO 868)

Abrasion resistance

~30 mg (CS10 / 1000 g / 1000 cycles) (after 7 days at +23 °C) (EN ISO 5470-1)

Flexural-strength

~4 MPa (after 7 days at +23 °C) (EN ISO 178)

Tensile adhesion strength

> 1.5 N/mm² (failure in concrete) (EN 1542)

Electrostatic behaviour

Typical average resistance to ground	RG ≤ 10^6 Ω to 10^7 Ω	(EN 1081)

Note:Measurement results can be affected by ESD clothing, ambient conditions, measurement equipment, cleanliness of the floor and the test personnel.

Service temperature

IMPORTANT
Avoid exposure to moist or wet heat > +80 °C
Sikafloor® broadcast systems with a minimum thickness of ~3–4 mm can resist short-term moist or wet heat of up to +80 °C, if the exposure is only temporary (less than 1 hour). While the system is exposed to temperatures up to +80 °C, simultaneous mechanical or chemical strain may cause damage to the system.

- Do not expose the system to chemical or mechanical strain at elevated temperatures.

APPLICATION INFORMATION

Mixing ratio

Part A : Part B (by weight)	83 : 17

Consumption

Coating system	Product	Consumption
Wearing layer horizontal areas (film thickness ~1,5 mm)	Sikafloor®-390 ECF N	2,5 kg/m²
Wearing layer vertical areas (film thickness ~1,5 mm)	Sikafloor®-390 ECF N with 2,5 % to 4 % (by weight) Sika® Extender T	2 × 1,25 kg/m²
Wearing layer with slip resistance (film thickness ~2,5 mm)	Sikafloor®-390 ECF N broadcast to excess with silicon carbide (0,5–1,0 mm)	1,6 kg/m² binder without filling 5–6 kg/m² silicon carbide

Note: These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.
IMPORTANT

Maximum layer thickness
The layer thickness of the wearing layer must be ~1,5 mm. Excessive thickness (more than 2,5 kg/m²) causes reduced conductivity.

Material temperature

Maximum	+30 °C
Minimum	+10 °C

Ambient air temperature

Maximum	+30 °C
Minimum	+10 °C

Relative air humidity

Maximum	80% r.h.

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

Maximum	+30 °C
Minimum	+10 °C

Substrate moisture content

Refer to the Product data sheets of the individual primer.

Pot Life

+10 °C	~60 minutes
+20 °C	~30 minutes
+30 °C	~10 minutes

Waiting time to overcoating

Substrate temperature	Minimum	Maximum
+10 °C	48 hours	6 days
+20 °C	24 hours	4 days
+30 °C	18 hours	48 hours

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

Applied product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10 °C	~48 hours	~6 days	~14 days
+20 °C	~30 hours	~4 days	~10 days
+30 °C	~20 hours	~3 days	~7 days

Note: Times are approximate and will be affected by changing ambient 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: Evaluation and preparation of surfaces for flooring systems
- Sika® Method Statement: Mixing and application of flooring systems

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.

APPLICATION INSTRUCTIONS

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

EQUIPMENT

APPLICATION EQUIPMENT
Apply the Product with a serrated trowel – for example, the large-surface scraper No. 656 or the toothed blade No. 25 from Polyplan (www.polyplan.com).
MIXING EQUIPMENT
- Electric double-paddle mixer (> 700 W, 300 rpm to 400 rpm)

SUBSTRATE QUALITY

Cementitious substrates must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm ².
Substrates must be clean, dry and free of contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

SUBSTRATE PREPARATION

MECHANICAL SUBSTRATE PREPARATION
IMPORTANT
Surface defects due to voids in the substrate
Voids and blow holes in the substrate will weaken the surface and damage the covering Product if not repaired during the preparation process.
- Fully expose blow holes and voids during surface preparation to identify the required repairs.
- Remove weak cementitious substrates.
- Prepare cementitious substrates mechanically using abrasive blast cleaning, abrasive planing or scarifying equipment to remove cement laitance.
- Before applying thin layer resins, remove high spots by grinding.
- Before applying the Product, remove all dust, loose and friable material from the application surface with an industrial vacuuming equipment.
- Level the surface or fill cracks, blow holes and voids with products from the Sikafloor®, Sikadur® and Sikagard® range of materials.

For additional information on products for leveling and repairing defects, contact Sika® Technical Services.
SUBSTRATE PREPARATION OF NON-CEMENTITIOUS SUBSTRATES
For information on substrate preparation of non-cementitious substrates, contact Sika® Technical Services.

MIXING

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. Mix Part A + B continuously for ~3 minutes until a uniformly coloured mix is achieved.
4. (**Optional**) If necessary, gradually add between 2,5 % and 4 % by weight of flooring resin of Sika® Extender T.
5. If additional materials were added, mix for a further 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
Damaged finish due to heating with fossil fuel heaters
Fossil fuel heaters powered by gas, oil or paraffin produce large quantities of both carbon dioxide and water vapour, which may adversely affect the finish.
- For temporary heating, use only electrically powered warm air blower systems. Do not use gas, oil, paraffin or other fossil fuel heaters.

IMPORTANT
Apply approved reference area before full system application
Apply a reference area before the application of a full system. The reference area must be assessed and accepted by all parties before full project application.
SELF-SMOOTHING WEARING LAYER
- Pour the mixed Product onto the substrate. For the consumption, refer to 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.

WEARING LAYER (VERTICAL SURFACE)
Preconditions
Sika® Extender T has been added to the Product during the mixing procedure. Refer to the Mixing section in Application Instructions and the Consumption section in Application Information.
- Apply the first layer by roller. For the consumption, refer to Application Information.
- Allow the first layer to cure as specified in Waiting time to overcoating.
- Install the earthing plates.
- Apply the conductive primer by roller.
- Allow the conductive primer to cure as specified in Waiting time to overcoating.
- Apply the second layer by roller. For the consumption, refer to Application Information.

WEARING LAYER WITH SLIP RESISTANCE
- Pour the mixed Product onto the substrate. For the consumption, refer to Application Information.
- Apply the Product evenly over the surface with a serrated trowel.
- Broadcast the surface to excess with silicon carbide. For the consumption, refer to Application Information.
- After the material has cured, remove the excess aggregate with an industrial vacuuming equipment.

TEXTURED COATING
- Pour the mixed Product onto the substrate. For the consumption, refer to Application Information.
- Apply the Product in two directions at right angles with a textured 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

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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