Construction

Sikafloor®-262 AS N

2-part epoxy electrostatically conductive self-smoothing system

Product Description

Sikafloor®-262 AS N is a two part, self-smoothing, coloured epoxy resin coating.

Uses

- Decorative and protective electrostatically conductive self-smoothing system for concrete or cement screeds with normal up to medium heavy wear.
- Suitable as a wearing course in industries, such as automotive, electronic and pharmaceutical manufacturing, storage facilities and warehouses.
- Particularly suitable for areas with sensitive electronic equipment e.g. CNC machinery, computer rooms , aircraft maintenance sheds, battery-charging rooms and areas subjected to high explosion risks etc.

Characteristics / Advantages

- Electrostatically conductive
- Good chemical and mechanical resistance
- Easy to clean
- Economical
- Liquid proof
- Solvent-free
- Semi-gloss finish
- Slip resistant surface possible

Test

Approval / Standards

Fire classification in accordance with EN 13501-1, Report-No. 2007-B-0181/17, MPA Dresden, Germany, May 2007.

Product Data

Form

Appearance / Colours

Resin - part A: coloured, liquid
Hardener - part B: transparent, liquid

Almost unlimited choice of colour shades.

Due to the nature of carbon fibers providing the conductivity, it is not possible to achieve exact colour matching. With very bright colours (such as yellow and orange), this effect is increased. Under direct sun light there may be some discolouration and colour variation, this has no influence on the function and performance of the coating.

Packaging	Part A: 21 kg containers Part B: 4 kg containers Part A+B: 25 kg ready to mix units

Storage

Storage Conditions / Shelf-Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.

Technical Data

Chemical Base	Epoxy	
Density	Part A: ~ 1.69 kg/l Part B: ~ 1.03 kg/l Mixed resin: ~ 1.53 kg/l Filled resin 1 : 0.4 : ~ 1.74 kg/l All Density values at +23°C	(DIN EN ISO 2811-1)
Solid Content	~ 97% (by volume) / ~97% (by weight)	
Electrostatic Behaviour	Resistance to earth R_E < 10^6 Ω	(IEC 61340-4-1; EN 1081)

Mechanical / Physical Properties

Compressive Strength	Resin: ~ 80 N/mm² (28 days / +23°C)	(EN 196-1)
Flexural Strength	Resin: ~ 40 N/mm² (28 days / +23°C)	(EN 196-1)
Bond Strength	> 1.5 N/mm² (failure in concrete)	(ISO 4624)
Shore D Hardness	77 (3 days / +23°C)	(DIN 53 505)
Abrasion Resistance	100 mg (CS 10/1000/1000) (7 days / +23°C)	(DIN 53 109 (Taber Abrader Test))

Resistance

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

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C
Short-term max. 7 d	+80°C
Short-term max. 2 h	+100°C

Short-term moist/wet heat* up to +80°C where exposure is only occasional (i.e. during steam cleaning etc.)

*No simultaneous chemical and mechanical exposure.

System Information

System Structure

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

Primer:	1 x Sikafloor®-156 / -161
Earthing connection:	Sikafloor® Earthing Kit
Conductive coat:	1 x Sikafloor®-220 W Conductive
Conductive wearing course:	1 x Sikafloor®-262 AS N, filled with Sikafloor®-Filler 1

Note: alternatively quartz sand 0.1-0.3 mm can be used as a filler, which will result in a gloss finish with a slight change of the aesthetical appearance.

Note: The system configurations as described must be fully complied with and may not be changed. 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.

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-156 / -161	0.3 - 0.5 kg/m²
Levelling (optional)	Sikafloor®-156 / -161 mortar	Refer to PDS of Sikafloor®-156 / -161
Conductive coat	Sikafloor®-220 W Conductive	0.08 - 0.10 kg/m²
Wearing course smooth (Film thickness ~ 1.5 mm)	Sikafloor®-262 AS N filled with Sikafloor®-Filler 1	Maximum 2.5 kg/m² Binder + Sikafloor®-Filler 1 10 - 20°C: 1 : 0.2 pbw (2.0 + 0.5 kg/m²) 20 - 30°C: 1 : 0.3 pbw (1.9 + 0.6 kg/m²)
Wearing course smooth (Film thickness ~ 1.5 mm)	Sikafloor®-262 AS N filled with quartz sand 0.1 - 0.3 mm	Maximum 2.5 kg/m² Binder + quartz sand 10 - 15°C: 1 : 0.2 pbw (2.0 + 0.5 kg/m²) 15 - 20°C: 1 : 0.3 pbw (1.9 + 0.6 kg/m²) 20 - 30°C: 1 : 0.4 pbw (1.8 + 0.7 kg/m²
Wearing course textured (Film thickness ~ 0.5 mm)	Sikafloor®-262 AS N + Extender T + Thinner C	0.75 kg/m² 1.25 % (by weight) 2% (by weight)

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

Substrate Quality

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2.

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.

Substrate Preparation

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 influences the film thickness and thus the conductivity.

High spots must be removed by e.g. 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.

Application Conditions / Limitations

Substrate Temperature

+10°C min. / +30°C max.

Ambient Temperature

+10°C min. / +30°C max.

Substrate Humidity

≤ 4% pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet).

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.

Application Instructions

Mixing

Part A : part B = 84 : 16 (by weight)

Mixing Time

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 2 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, add the quartz sand 0.1 - 0.3 mm and mix for a further 2 minutes until a uniform mix has been achieved.

To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.

Over mixing must be avoided to minimize air entrainment.

Mixing Tools

Sikafloor®-262 AS N must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

Application Method / Tools

Prior to application, confirm substrate moisture content, r.h. and dew point.

If > 4% pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.

Levelling:
Rough surfaces need to be levelled first because varying thickness of the Sikafloor®-262 AS N wearing course will influence the conductivity and aesthetical appearance. Therefore use Sikafloor®-156 / -161 levelling mortar (see PDS).

Placing of earthing points:
See below “Notes on Application / Limits”.

Application of Sikafloor® conductive coat:
See PDS of Sikafloor®-220 W conductive.

Wearing course smooth:
Sikafloor®-262 AS N is poured, spread evenly by means of a serrated trowel. Roll immediately in two directions with spiked roller to ensure even thickness.

Wearing course textured:
Sikafloor®-262 AS N (unfilled) is applied with a serrated trowel and then back-rolled (crosswise) with a textured roller.

Cleaning of Tools

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

Potlife

Temperatures	Time
+10°C	~ 40 minutes
+20°C	~ 25 minutes
+30°C	~ 15 minutes

Waiting Time / Overcoatability

Before applying Sikafloor®-262 AS N on Sikafloor®-220 W Conductive allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	7 days
+20°C	15 hours	5 days
+30°C	10 hours	4 days

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

Notes on Application / Limitations

This product may only be used by experienced professionals.

Do not apply Sikafloor®-262 AS N on substrates in which significant vapour pressure may occur.

Do not blind the primer.

Freshly applied Sikafloor®-262 AS N 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.

Tools
Recommended supplier of tools:
PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, www.polyplan.com
Serrated trowel for smooth wearing layer:
e.g. Large-Surface Scrapper No. 565, Toothed blades No. 25
Serrated trowel for textured wearing layer:
e.g. Trowel No. 999 or Adhesive Spreader No.777, Toothed blades No. 23

Layer thickness of wearing course: ~ 1.5 mm.
Excessive thickness (more than 2.5 kg/m²) causes reduced conductivity.

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 / 100m²

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. 20 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.

For exact colour matching, ensure the Sikafloor®-262 AS N in each area is applied from the same control batch numbers.

Construction

Curing Details

Applied Product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 30 hours	~ 5 days	~ 10 days
+20°C	~ 24 hours	~ 3 days	~ 7 days
+30°C	~ 16 hours	~ 2 days	~ 5 days

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

Cleaning / Maintenance

Methods

To maintain the appearance of the floor after application, Sikafloor®-262 AS N 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.

Value Base

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

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