Technical Datasheet

DUROFLOOR-PSF

Two-component, solvent-free epoxy primer

Description

DUROFLOOR-PSF is a two-component, solvent-free, transparent epoxy system. It offers high hardness and abrasion resistance. It is resistant to acids, alkalis, petroleum products and salt solutions.
Certified according to EN 13813 and classified as SR-B2,0-AR0,5-IR4. CE marked.
DUROFLOOR-PSF has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts. Registration No: EPD-IES-0016841, The International EPD® System.

Fields of application

DUROFLOOR-PSF is suitable for:

- Priming cementitious surfaces to be covered with epoxy floor coatings from the DUROFLOOR range.
- Sealing cementitious floors in industrial areas, warehouses, etc.
- Preparing resin mortars for floorings.
- Preparing material for repairing cracks or smoothing substrates prior to application of flooring layers.

Technical data

Basis:	two-component epoxy resin
Color:	transparent
Viscosity:	710 mPa·s (+23°C)
Density (A+B):	1.07 kg/l
Mixing ratio (A:B):	100:46 by weight
Pot life:	approx. 35 min (+20°C)
Reaction to fire: (EN 13501-1)	F_{fl}
Minimum hardening temperature:	+8°C
SHORE D hardness:	83
Walkability:	after 20 h (+23°C)
Overcoat time:	after 20 h (+23°C)
Final strength:	after 7 days (+23°C)
Compressive strength: (EN 13892-2)	≥ 55 N/mm²
Flexural strength: (EN 13892-2)	≥ 35 N/mm²
Adhesion strength: (EN 13892-8)	≥ 3 N/mm²
Impact resistance: (EN ISO 6272)	IR 4
Abrasion resistance: (EN 13892-4, BCA)	AR 0,5
Abrasion resistance: (ASTM D 4060, TABER TEST, CS 10/1000/1000)	60 mg

Cleaning of tools:
Tools should be cleaned with SM-25 solvent immediately after use.

Directions for use

1. Substrate preparation
The flooring surface should be:

- Dry and stable.
- Free of materials that prevent bonding, e.g. dust, loose particles, grease, etc.
- Protected from negative-side water pressure.

It should also meet the following requirements:

Concrete quality:	at least C20/25
Cement screed quality:	cement content 350 kg/m³
Age:	at least 28 days
Moisture content:	< 4%

Depending on the nature of the substrate, it should be prepared by brushing, grinding, sandblasting, water blasting, pellet blasting, etc. Following this, the surface should be cleaned from dust with a high-suction vacuum cleaner.

2. Mixing of the components
Components A (resin) and B (hardener) are packaged in two separate, pre-measured containers, with fixed mixing ratio by weight.

DUROFLOOR-PSF

The entire contents of component B is added to component A. The 2 components should be mixed for about 5 minutes with a low-speed mixer (300 rpm). It is important to thoroughly stir the mixture near the sides and bottom of the container, to achieve uniform dispersion of the hardener.

3. Application - Consumption
Depending on the use of DUROFLOOR-PSF, there are different cases of application:

a) Priming
DUROFLOOR-PSF is applied by roller, brush or spray in one layer. Consumption: 200-300 g/m^2.
The qualified DUROFLOOR system is applied within 24 hours and after the primer has hardened.
In case the DUROFLOOR system is to be applied after the first 24 hours, quartz sand (Ø 0.1-0.4 mm or 0.3-0.8 mm) should be spread on the surface, while the primer is still fresh, in order to ensure good bonding.
After DUROFLOOR-PSF has hardened, any loose grains should be removed with a high-suction vacuum cleaner.

b) Sealing of cementitious surfaces
DUROFLOOR-PSF is brushed on the prepared surface in two layers. Consumption: 200-250 g/m^2/layer.
To prepare slip-resistant surfaces, quartz sand (Ø 0.1-0.4 mm (or M32) or 0.3-0.8 mm) is broadcast on the still fresh first layer of DUROFLOOR-PSF. After DUROFLOOR-PSF has hardened, any loose grains should be removed with a vacuum cleaner. Finally, the second layer of DUROFLOOR-PSF is applied. Consumption of quartz sand: 2-3 kg/m^2.

c) Preparation of resin mortars
The surface should be primed with DUROFLOOR-PSF. Consumption: 200-300 g/m^2.

The mortar is prepared according to the following ratio:

DUROFLOOR-PSF:	1 part by weight
Quartz sand:	3-4 parts by weight

Depending on the layer thickness, the quartz sand should have a particle size of 0.1-0.4 mm (or M32) or 0.3-0.8 mm.

Components A and B of DUROFLOOR-PSF should be thoroughly mixed. Then, the quartz sand is added under continuous stirring and mixed until the resin mortar has become homogeneous.
The epoxy mortar is applied at a minimum thickness of 8mm with the help of guides and compacted with a smoothing machine.
Resin-mortar consumption: approx. 2.0 kg/m^2/mm of layer thickness.

d) Repair – Smoothing
Priming with DUROFLOOR-PSF should take place first. Consumption: 200-300 g/m^2.

The repair material is prepared with:

DUROFLOOR-PSF:	1 part by weight
Quartz sand:	2-3 parts by weight

Depending on the layer thickness, quartz sand should have a particle-size of 0.1-0.4 mm (or M32) or 0.3-0.8 mm, and should be added into the already mixed resin (components A+B). It is important that sand and resin are thoroughly mixed.
The repair material is applied on the surface in one layer. Consumption: approx. 1.8 kg/m^2/mm.

Packaging

DUROFLOOR-PSF is supplied in packaging (A+B) of 5 kg, 10 kg, and 25 kg, with components A and B at a fixed weight ratio.

Shelf life – Storage

12 months from production date if stored in original sealed packaging, in areas protected from humidity and direct sunlight. Recommended storage temperature between +5°C and +35°C.

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Remarks

- The workability of epoxy materials is affected by temperature. The ideal temperature of application is between +15°C and +25°C, for which the product obtains optimal workability and curing time. Room temperature below +15°C will expand the curing time, while temperatures above +30°C will reduce it. It is recommended to mildly preheat the product in the winter, and store the product in a cool room before application in the summer.
- Bonding between successive layers may be severely affected by moisture or dirt.
- Epoxy layers should be protected from moisture for 4-6 hours after application. Moisture may whiten the surface or/and make it sticky. It may also disturb hardening. Faded or sticky layers in parts of the surface should be removed by grinding or milling and laid again.
- In case recoat time is longer than expected or in case old floors are to be overlaid again, the surface should be thoroughly cleaned and ground before applying the new layer.
- After hardening, DUROFLOOR-PSF is totally safe for health.
- Consult the directions for safe use and precautions written on the packaging before use.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/EC (Annex II, table A), the maximum allowed VOC content for the product subcategory h, type SB, is 750 g/l (2010) for the ready-to-use product. The ready-to-use product DUROFLOOR-PSF contains a maximum of 750 g/l VOC.

CE

2032

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2032-CPR-10.11

DoP No.: DUROFLOOR-PSF / 1862-01

EN 1504-2

Surface protection products

Coating

Permeability to CO_2: Sd > 50m

Water vapor permeability: Class I (permeable)

Capillary absorption: w < 0.1 kg/m^2·h$^{0.5}$

Adhesion: ≥ 2.0 MPa

Reaction to fire: Euroclass F_{fl}

Dangerous substances comply with 5.3

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EN 13813 SR-B2,0-AR0,5-IR4 Synthetic Resin screed material for use internally in buildings	**EN 13813** **SR-B2,0** Primer
Reaction to fire: F_{fl} Release of corrosive substances: SR Water permeability: NPD Wear resistance: AR0,5 Bond strength: B2,0 Impact resistance: IR4 Sound insulation: NPD Sound absorption: NPD Thermal resistance: NPD Chemical resistance: NPD	F_{fl} SR NPD NPD B2,0 NPD NPD NPD NPD NPD

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