Empowered by Expertise!

SigaPox 412

Moisture-tolerant special base coat

Description:

SigaPox 412 is a 2-component epoxy resin. The material is highly moisture tolerant.

SigaPox 412 humidifies matt-damp surfaces, blocks water, and leads to excellent adhesion.

In combination with the degreaser **SigaMot 950** oily substrate can be cleaned. Afterwards a base coat can be applied.

Because of the very good penetration capability and high wettability properties the material stands the test on critical substrate. The material offers increased adhesive strength for substrate with lacking solidity. Because of its medium viscosity the material is suitable for scratch coats and as a wet bonding course for bonded screed. Good adhesion on blasted steel.

Characteristics:

- High solids content
- Low-emission quality
- Very excellent adhesion
- Reinforcing
- High penetration
- All-purpose application
- Resistant to hydrolysis and saponification
- Cures even on damp substrate
- Increased durability to osmosis
- Free of deleterious substances against varnish

Application:

- Use as base coat before coating pale-damp and chemically wet-cleaned substrate.
- Use as base coat on early age screed- and concrete-substrate.
- Use as base coat on sand-blasted steel.
- Reinforcement for substrate with insufficient rigidity.
- Scratch-coat for sealing and levelling.

Technical data:

Mixing ratio	Parts by weight	A : B =	100 : 60	
	Parts by volume	A : B =	100 : 66	
Processing time:	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	60 minutes	40 minutes	20 minutes
Processing temperature		Minimum 10 °C / 50 °F (room- and floor-temperature)		
Curing time (Accessibility):	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	24 - 48 hrs.	12 - 15 hrs.	8 - 12 hrs.
Curing		2 - 3 days for mechanical load at 20 °C / 68 °F 7 days for chemical resistance at 20 °C / 68 °F		
Further coatings		After curing, but not longer than 48 hours at 20 °C / 68 °F		
Consumption	Base coat	Approx. 0.3 - 0.4 kg/m^2		
	Scratch coat	Approx. 0.4 - 0.6 kg/m^2		
	Mortar	Approx. 0.150 - 0.300 kg/m^2 for each mm of layer		
Packaging		Hobbock-Combi 30 kg		
Shelf life		12 months (originally sealed)		

1. Substrate

The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil, and paint residues must be removed using suitable methods. **SigaPox 412** can be used as a bonding course on pale-damp substrate after degreasing with **SigaMot 950.** Suitable surfaces are concrete C20/25, cement screed CT-C35-F5, as well as other adequately sound surfaces. The substrate must have adequately high strength for the proposed occupational use. The coating of mastic asphalt with epoxy resin is not recommended. The adhesive tensile strength can be increased on stability-lacking substrate because of the reinforcing effect of the material. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The surface strength must then be a minimum of 1.5 N/mm². For concrete, moisture content must not exceed 4.5 CM-%, remaining residual humidity. The possibility of moisture ingress from the rear must be permanently excluded.

Under certain circumstances **SigaPox 412** may be applied on damp substrate (up to about 6.0 CM-%). For application on substrate with increased dampness a double layer of primer is required. If necessary, get advice from SIGAS technical support.

Reconstructing floors requires a final examination, e.g. testing the adhesive tensile strength beside the usual requirements.

2. Mixing

Single packages of the components need to be weighed in the precise mixing ratio. Combi-trading units will be supplied in the correctly measured mixing ratio. ComponentA has sufficient volume for the entire trading unit.

Decant the hardener B into the resin completely. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again (“to repot”).

Producing scratch coats:

1.0 kg **SigaPox 412**

0.5 - 0.8 kg **SIGAS quartz sand-mix 2/1**

Before adding additives the resin has to be premixed. The amount of the sand-blend to be added depends on the desired texture and consistency.

3. Processing / Handling

Base coat: Processing the material as a base coat takes place immediately after mixing with a coating knife, spatula, or nylon roller. Apply an evenly closed sealing coat on the substrate, re-roll time-delayed if necessary. On highly absorbent surfaces a second coat or a saturated scratch coat is recommended to achieve a fully sealed substrate. While still fresh, scatter the surface with approx. 0.8 kg fire-dried quartz sand (grain size 0.3/0.8 mm) for optimum adhesion. This is mandatory if the subsequent coatings will be applied later than 36 hours after base coat application. For an increased resistance to osmosis it is necessary to apply the base coat in two layers, or apply a base- and scratch-coat. Then do not scatter the first coating and work within the recommended time pattern.

Scratch coat: For smoothing and completely sealing the substrate it is recommended to apply a scratch coat before subsequent coatings. Use a trowel, metal-, or rubber coating knife. The consistency has to be adjusted according to the absorbency of the substrate and set so the material may run true.

Floor- and air-temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The difference in floor- and room-temperature must be less than 3 °C / 37.4 °F so the curing will not be disturbed. If a dew-point situation occurs adhesion may malfunction, curing may be disturbed, and spotting may occur. Curing time applies to 20 °C / 68 °F. Lower temperature may increase, higher temperature may decrease the curing and processing time. If working conditions are not complied with, deviations in the described technical properties may occur in the end product.

Special remarks: We advise against the”gumming“ of screed joints/flat joints with pure or with thixotropic agent filled epoxy resin. In the course of time, these areas will begin to show on the surface. For the application, use always the SIGAS-Base coats **SigaPox 411** or **SigaPox 481** in combination with quartz sand e.g **SIGAS quartz sand-mix 1** or **SIGAS quartz sand-mix 2/1.** For this, we recommend to add at least 1 - 3 parts by weight of filler.

4. Cleaning

To remove fresh contamination and to clean tools use **Cleaner V20** or **V30** immediately. Hardened material can only be removed mechanically.

5. Storage

Store in dry and at frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

6. Special Remarks

The product is subject to the hazardous material-, operational safety-, and transport-regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information on the labelled containers!

GISCODE (05/2018 modification): RE 30

Indication of VOC-Content:

(EG-Regulation 2004/42)

Maximum Permissible Value 500 g/l (2010,II,j/lb): Ready-for-use product contains < 500 g/l VOC.

Technical Data*

Viscosity	Components A + B	950	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content		> 99	weight-%	SIGAS-Method
Density	Components A + B	1.08	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss		0.3	weight-%	(after 28 days)
Water absorption		< 0.2	weight-%	DIN 53495
Bending tensile strength		> 25	N/mm²	DIN EN 196/1
Compressive strength		> 70	N/mm²	DIN EN 196/1
Shore-hardness D		82	-	DIN 53505 (after 7 days)
Adhesive tensile strength		> 1.5	N/mm²	DIN EN 1542

(*Values achieved in sampling are average values. Variation in product specification is possible.)

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