

SigaPox 440

2-component coating resin, solvent-free

Empowered by Expertise!

Description:

SigaPox 440 is a pre-formulated, 2-component epoxy resin binding agent. An economical coating for commercially and industrially used floors in combination with additives.

SIGAS quartz sand-mix 2/1 will be added on site to the unfilled coating depending on the particular application and thickness of layers. The unfilled binding agent combination is economically fillable. The mixture is easy to process and may be applied with a coating knife and offers very good technical properties.

The cured coating offers a very high durability and very good resistance to a wide range of chemicals.

SigaPox 440 is resistant to water, salts, salt solutions, alkalis and bases, as well as diluted mineral acids like hydrochloric acid and sulphuric acid, as well as benzene, fuel, grease, oil, and so on. Conditionally resistant to concentrated mineral acids, organic acids, such as formic acid, acetic acid, and concentrated lactic acid, etc. Not permanently resistant to chlorinated hydrocarbons, esters, concentrated nitric acid. For any special requirements to resistance please obtain advice!

The coating resin can be supplied non-pigmented or pigmented.

Characteristics:

- Solvent-free
- Very economical
- Good filling capacity
- Good resistance range
- Resistant to hydrolysis and saponification
- Hard, abrasion-resistant finish
- Reliable quality

Application:

- Commercially used areas with medium mechanical load, e.g. production and storage areas for many economic areas (2 mm coating).
- Commercially used areas with high mechanical load, e.g. production and storage areas for many economic areas (3 - 5 mm coating).
- Areas with increased exposure to chemicals and water.
- Base coats for scattered coatings in layers of 3 - 5 mm (top coat finish possible with different products, depending on the requirements, like e.g. with **SigaPox 476** and **SigaPox 477**).
- Pigmented wear coats for decorative, colour-sand scattered coatings and subsequent sealing coats, e.g. with **SigaPox 476**, **SigaPox 465**, **SigaPox 479**.

Technical data:

Mixing ratio	Parts by weight Parts by volume	A : B = 2 : 1 A : B = 100 : 55
Processing time	Temperature Time	10 °C / 50 °F 20 °C / 68 °F 30 °C / 86 °F 55 minutes 30 minutes 20 minutes
Processing temperature		Minimum 10 °C / 50 °F (room- and floor-temperature)
Curing time (Accessibility)	Temperature Time	10 °C / 50 °F 20 °C / 68 °F 30 °C / 86 °F 24 - 36 hrs. 14 - 18 hrs. 10 - 14hrs.
Curing		2 - 3 days for mechanical load at 20 °C / 68 °F 7 days for chemical resistance at 20 °C / 68 °F
Subsequent coatings		After 14 - 18 hours, but not longer than 48 hours at 20° C / 68 °F
Consumption		1.3 - 1.5 kg/m ² resin (at 2 mm thickness) + additives
Layers		1.7 - 5.0 mm
Addition of quartz sand		Recommended starting at layers of above 2 mm thickness with up to 1.5 kg additive for each 1.0 kg resin (see "Mixing")
Packaging		Hobbock-Combi 30 kg
Colours		Colours on request!
Shelf life		12 months (originally sealed)

1. Build-up of Coats

Smooth coating

- Prime with the recommended SIGAS-Base Coats, like e.g. **SigaPox 410**, **SigaPox 411**, **SigaPox 412**, **SigaPox 413**, or **SigaPox 415**. Consumption approx. 0.3 - 0.4 kg/m² depending on the substrate.
- Apply a scratch coat for a planar substrate, with e.g. **SigaPox 410**, **SigaPox 411**, **SigaPox 415**, and **SIGAS quartz sand-mix 2/1** mixing ratio approx. 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.0 kg/m².
- Apply **SigaPox 440** filled with **SIGAS quartz sand-mix 2/1** with a trowel, consumption approx. 2.7 - 2.9 kg/m² for 2 mm layers.
- Optional scattering with silicium carbide, delustering agent, or decorative flakes.
- Seal the surface with a suitable silky-, glossy- or matt sealer, like e.g. **SigaPox 470**, **SigaFlex 530**, **SigaFlex 533**, or **SigaFlex 535**.

Coating with slip resistance grade R11/12

- Prime with the recommended SIGAS-Base Coats, like e.g. **SigaPox 410**, **SigaPox 411**, **SigaPox 412**, **SigaPox 413**, or **SigaPox 415**. Consumption approx. 0.3 - 0.4 kg/m² depending on the substrate.
- Apply a scratch coat for a planar substrate, where necessary, with e.g. **SigaPox 410**, **SigaPox 411**, **SigaPox 415**, and **SIGAS quartz sand-mix 2/1**, mixing ratio approx. 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.0 kg/m².
- Apply the filled **SigaPox 440** in layers of 1.5 - 2.0 mm and scatter completely with quartz sand 0.3/0.8 mm or 0.7/1.2 mm.
- After curing, sweep and vacuum off any excess sand until no more sand is released.
- Apply **SigaPox 477** or **SigaPox 478** with a rubber squeegee and distribute with a velour roller using criss-cross strokes. Consumption 0.6 - 0.7 kg/m². It is mandatory to stay within the recommended amounts of consumption for the slip resistance.
- Optionally, additional sealers for matting, increasing the surface finish, or the chemical resistance may be applied.

2. Substrate

The substrate to be coated has to be levelled, dry, and 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. Please refer to the product information of the recommended SIGAS-Base Coats, like e.g. **SigaPox 411**, **SigaPox 410**, **SigaPox 412** and **SigaPox 415**. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The prepared area has to be primed accurately, saturated, and free of pores. Estimating the substrate according to the necessary sealed state may be difficult, so a scratch coat is recommended for smoothing the surface. If the substrate hasn't been sealed completely bubbles and pores may appear because of rising air. Conduct a trial if in doubt. To improve adhesion, scatter the surface with approx. 0.5 - 1.0 kg/m² fire-dried quartz sand, grain size 0.3/0.8 mm.

3. Mixing

Combi-trading units will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener compound B into the resin. 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. Additives should be stirred in with a compulsory mixer. Stir up the single components for partial withdrawals and weigh in the exact mixing ratio.

Addition of Additives: depending on the thickness of layers different sand types may be added. Use a compulsory mixer.

Outline formula for a flow-coating 2 - 3 mm

1.0 parts by weight **SigaPox 440** (A+B)

1.2 - 1.5 parts by weight **SIGAS quartz sand-mix 2/1**

Consumption for 2 mm: 3.2 - 3.4 kg/m² mixture

Consumption of **SigaPox 440** for 2 mm: 1.3 - 1.5 kg/m²

The amount of additive depends on the thickness of layers, temperature, and kind of sand. For thin coatings use more of the

quartz flour and altogether less additive. Conduct a trial and seek advice if in doubt.

4. Processing / Handling

Process the material immediately after mixing with a coating knife or notched trowel by pulling out an even layer on the prepared substrate. Compared to ready-to-use coatings the material has to be processed more rapidly to avoid any deposits on the bottom. The product is adjusted with an optimum of air venting. To upgrade the moistening of the substrate, optimizing the flow-properties, and removing any air blows, it is recommended to roll with a spiked roller. Roll time-delayed after 10 - 20 minutes with a spiked roller. Divide working areas before starting work and always work "fresh-in-fresh" to avoid any shoulders. Do not scatter too early because of air venting, optimum point of time is after 20 - 30 minutes at 20 °C / 68 °F.

Floor- and air-temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. Curing time applies to 20 °C / 68 °F. Lower temperature may increase; higher temperature may decrease the curing and processing time.

5. Cleaning

To remove fresh contamination and to clean tools use **Cleaner V20** or **V40** immediately. Hardened material can only be removed mechanically.

6. 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.

7. 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 labelled on the containers!

GISCODE: RE 1

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	750	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content		100	%	SIGAS-Method
Density	Components A + B	1.10	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss		0.25	weight-%	(after 28 days)
Water absorption		< 0.2	weight-%	DIN 53495
Bending tensile strength		35	N/mm ²	DIN EN 196/1
Compressive strength		80	N/mm ²	DIN EN 196/1
Shore-hardness D		78	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)		55	mg	ASTM D4060

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

SigaPox 440; 0.00/02.08.2018. All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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