SigaPox 430

All-purpose, pigmented 2-component epoxy resin coating and top coat

Empowered by Expertise!

Description:

SigaPox 430 is an all-purpose, solvent-free, pigmented, 2-component epoxy resin coating for hard-wearing industrial coatings.

SigaPox 430 is high-quality adjusted, with very good coverage. Due to the low viscosity the product is suitable for rolled coatings, as well as top sealing coat for scattered, slip resistant coatings.

The material is suitable for smooth coatings for 1 - 4 mm layers. The coating material may be mixed with fire-dried quartz sand (grain size 0.1/0.3 mm) up to 0.7 parts by weight. Mixing with quartz sand is useful and economic for layers starting at 2 mm. The coating material has good pro- cessing-, self-levelling and smoothing properties.

SigaPox 430 has well balanced properties and may be used all-purpose. Because the product is multi-purpose and has a wide range of application possibilities the amount of material to be stored may be reduced.

The cured coatings are very resistant to mechanical load and different chemicals. The coating is resistant to water, salt, salt solutions, alkaline and bases, as well as diluted mineral acids, like salt or sulphuric acid. There is also a good resistance to many solvents like benzene, fuel, grease, oil, and so on. Conditional resistance to concentrated mineral acid. Short-term resistance to concentrated and diluted organic acids like formic or acetic acid. Nondurable resistance to chlorinated hydrocarbon, ester, concentrated nitric acid, and others. For special demands to resistance obtain advice.

SigaPox 430 is available in different colours. Slight colour alterations may be possible due to technical reasons. Pale colour epoxy resin coatings may show slight colour alterations, which may become visible. For an epoxy resin product **SigaPox 430** shows only slight colour alterations though.

Characteristics:

- Good self-levelling properties
- Suitable even for thin coatings
- All-purpose use
- Coloured glossy surface
- Can be filled with sand
- Water and chemical resistant
- Wear-resistant
- Only slightly yellowing
- Reduced stock
- Solvent-free
- Free of deleterious substances against varnish

Application:

- Thin coatings 0.8 - 1.5 mm for light mechanical load.
- Smooth coatings for commercially used areas with medium mechanical load, e.g. production areas, stacking ground in many economic sectors (2 mm coating).
- Smooth coatings for commercially used areas with high demands on mechanical load, e.g. production areas, stacking ground in many economic sectors (3 - 4 mm coating).
- Plain-coloured top sealer for scattered coatings.
- Pigmented supporting level for decorative, colour-sand scattered coatings and subsequent sealing coats, e.g. with **SigaPox 476, SigaPox 465,** or even **SigaPox 430.**
- OS 8 coatings for areas with vehicle traffic and high mechanical load.

Technical data:

Mixing ratio	Parts by weight	A : B =	4 : 1	
	Parts by volume	A : B =	100 : 38	
Processing time:	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	70 – 90 min	30 – 35 min	15 - 20 min
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 - 36 hrs.	14 - 18 hrs.	10 - 14hrs.
Curing		48 - 72 hours 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	Top coat	0.550 - 0.900 kg/m²		
	Thin coat	0.8 - 1.5 kg/m²		
	Standard coat	1.3 - 1.5 kg/m² for each mm layer		
Packaging		Hobbock-Combi 30 kg		
Colours		Colours on request!		
Shelf life		12 months (originally sealed)		

1. Build-up of Coats

Smooth thin coatings

- Apply base coat with the recommended SIGAS-Base Coat resin, like **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, e.g. with **SigaPox 410, SigaPox 411, SigaPox 415,** and **SIGAS quartz sand-mix 2/1.** Mixing ratio 1 : 0.8 parts by weight, consumption of mixture approx. 0.8 - 1.3 kg/m².
- Apply the coating **SigaPox 430** with a trowel, consumption 0.8 - 1.5 kg/m².

Smooth coating medium layer (2 mm)

- Apply a base coat with the recommended SIGAS-Base Coat resin, like **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, e.g. with **SigaPox 410, SigaPox 411, SigaPox 415,** and **SIGAS quartz sand-mix 2/1.** Mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.3 kg/m².
- Apply the coating **SigaPox 430** with a trowel, consumption 2.6 - 3.0 kg/m² for approx. 2 mm coating. Coating can be mixed with quartz sand (0.1/0.3 mm) up to 1 : 0.7.
- Optional: Scatter with silicium carbide, delustering agent or decorative flakes (chips).
- Optional: Seal the surface with a suitable silk gloss or matt-finished sealer like e.g. **SigaPox 470, SigaFlex 530, SigaFlex 533** or **SigaFlex 535.**

Plain coloured scattered coating according to OS 8 with slip resistance grade R11/V4

- If necessary: Apply a base coat with the recommended SIGAS-Base Coat resin, like **SigaPox 410, SigaPox 411, SigaPox 412, SigaPox 413,** or **SigaPox 415.** Consumption approx. 0.350 kg/m² depending on the substrate.
- If required: Apply a scratch coat for a planar surface,
  e.g. with **SigaPox 410, SigaPox 411, SigaPox 415,** and **SIGAS quartz sand-mix 2/1.** Mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.3 kg/m².
- Apply **SigaPox 430** as base coat filler approx. 15 % of quartz sand (0.3/0.8 mm) added, consumption 0.8 kg/m².
- For slip resistance grade R11/V4 scatter completely with quartz sand 0.3/0.8 mm.
- After curing sweep off excess sand, chip off, and vacuum until no more grain of sand is being released.
- Apply **SigaPox 430** as a top sealer with a rubber squeegee, distribute with a velour roller using criss-cross strokes and roll off evenly. Consumption approx. 0.6 - 0.7 kg/m².
- Note the recommendations for consumption for the slip resistance grade.

Note: The total layer thickness including primer and top- sealer must be of 2.5 mm. For purely protective measures in the sense of DIN EN 13813, it is required only a 1.5 mm layer thickness.

2. 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. Please refer to the product information for the recommended base coats, like **SigaPox 410, SigaPox 411, SigaPox 412, SigaPox 413,** and **SigaPox 415.** 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. Base coats may not rest for more than 2 days or must be scattered with quartz sand. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The prepared surface 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.

3. Mixing

SigaPox 430 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 completely. Blend with a slow speed mixer (200 - 400 r/pm) for 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to principally empty the mixture into a clean container and mix briefly once again ("to repot").

Adding quartz sand: Add after mixing components A and B. Fire dried quartz sand grain size 0.1/0.3 mm is suitable. Do not use any quartz flour or sand blend. The amount to be added depends on the thickness of layer, temperature, and type of sand. 1 kg of **SigaPox 430** may usually be filled with up to 0.7 kg of quartz sand. Adding sand is not recommended for thin coatings because self-levelling properties degrade.

Adding suspending agent: For coating concave moldings the material **SigaMot 960** has to be added for a stable adjustment. After mixing components A and B add 3 - 5 % of the thixotropic agent for a material that is free of streaks and adequately stable. When coating floors with a decline, adding 0.1 - 1.0 % of **SigaMot 960** may be necessary to keep the material in place. Scattering the area with sand is beneficiary.

4. Processing / Handling

Coatings: Process the material immediately after mixing with a coating knife or trowel by applying an even layer on the prepared surface. The product is adjusted with an optimum of air venting. To upgrade the moistening of the substrate, optimizing the self-levelling properties, and removing any air blows, it is recommended to roll with a spiked roller. Using the spiked roller should be carried out time-delayed – after 10 - 20 minutes. Divide working areas before starting work and always work "fresh-in-fresh" to avoid any shoulders.

Do not scatter too early – optimum point of time is after 10 - 30 minutes at 20 °C / 68 °F. Scatter with sand until the area is completely covered. Scattering too late may cause an uneven surface and bald spots may appear later on.

Top sealer for scattered coatings: After the base coat has cured, sweep and vacuum off the surface until no more excess quartz sand is released. For a slight slip resistance or reduced depth of roughness subsequently grind the peaks slightly for flattening. Distribute the fresh mixture on the floor. Use a smooth rubber squeegee, trowel, or steel coating knife, depending on the desired amount. Pull off and distribute. Watch for an even application and avoid ponding. Using a coating knife rake results in a smooth surface, soft trowels result in a coarser surface. For an even surface and to avoid bald spots re- roll with a velour roller. Using a roller for application results in a increased coarseness. Always work "fresh-in-fresh".

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. Exposure to water should be avoided within the first 7 days. 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.

5. Cleaning

To remove fresh contamination and to clean tools use **Cleaner V20** or **V30** 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	1800	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Density	Components A + B	1.42	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption		< 0.2	weight-%	DIN 53495
Bending tensile strength		> 45	N/mm²	DIN EN 196/1
Compressive strength		> 55	N/mm²	DIN EN 196/1
Shore-hardness D		80	–	DIN 53505 (7 days)
Abrasion (Taber)		55	mg	ASTM D4060

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

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