HEGGEL® Pox 455

Self-Levelling Low-emission Epoxy Resin Coating

You Build, We Protect!

HEGGEL® Pox 455 Clean

Anti-Bacterial Self-Levelling Low-emission Epoxy Resin Coating

Description:

HEGGEL Pox 455 is a high-quality, self-levelling, solvent-free and low-emission, two-component epoxy resin coating for robust, smooth coatings, as well as for scattered coatings especially for the usage in industrial areas.

HEGGEL Pox 455 Clean is a two-component epoxy resin coating provided with a preventive protection against bacterial contamination. This assists the production of permanently hygienic surfaces, even between the necessary cleaning and disinfection cycles.

Note: The processing information and the technical data of **HEGGEL Pox 455 Clean** do not differ from the standard product.

The coating offers good self-levelling and smoothing properties and cures very well. **HEGGEL Pox 455** may be blended with quartz sand which is beneficial and economical for layer thicknesses over 2 mm.

HEGGEL Pox 455 has a well-balanced chemical resistance. The cured coating is very resistant to mechanical load and has good resistance to different chemicals. The coating is resistant to water, salt, salt solutions, alkalines and bases, grease, oil, as well as diluted mineral acid, like salt -and sulphuric acid. Short-term resistance to solvents like benzine, fuel and so on. Very short-term resistance to concentrated mineral acids, organic acids like formic acid, acetic acid, lactic acid and so on.

HEGGEL Pox 455 is not resistant to chlorinated hydrocarbon, ester or nitric acid. Please obtain technical advice for chemical resistance requirements.

Characteristics:

- Low-emission
- Smooth, pigmented surface
- For scattering with silicium-Carbide / delustering agent
- Resistant to hydrolysis and saponification
- Well-balanced stability
- Fillable with sand
- Tough and wear-resistant

Applications:

- Low-emission coating for recreation rooms according to the principles of DIBt®.
- For industrially used areas with medium mechanical load, e.g., production areas, stacking grounds in many different economic sectors (2 mm coating).
- For industrially used areas with high mechanical load, e.g., production areas, stacking grounds in many different economic sectors (3 - 4 mm coating).
- Base coat and top coat for anti-skid scattered coatings in layers of 3 - 5 mm.

Application Data:

Mixing Ratio	**Parts by Weight**	A : B = 5 : 1		
	Parts by Volume	A : B = 100 : 31		
Processing Temperature		Minimum 10 °C (room -and floor- temperature)		
Further Coatings		After 18 - 20 hours, but not longer than 48 hours at 20°C		
Consumption		1.4 kg/m² for each 1 mm of layer		
Thickness of Layers		1.5 - 4.0 mm		
Addition of Quartz Sand		Recommended for layers starting at 2 mm of thickness, up to 50 % quartz sand 0.1/0.3 mm depending on usage and temperature.		
Colours		Colours upon request! (Slight colour alterations may be possible due to technical reasons.)		
	@Temperature	**10°C**	**20°C**	**30°C**
Curing Time	**Accessibility**	24 - 36 hrs	14 - 18 hrs	10 - 14 hrs
	Mechanical Load	-	2 - 3 days	-
	Chemical Load	-	7 days	-
Processing Time		50 min	30 min	20 min

Packaging:

Hobbock-Combi 30 kg

Storage:

12 months in sealed original containers under dry and cool conditions between 10 - 20°C. Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

Protect from heat and freeze!

1. Build-up of Coats

Smooth Coating

- Test and prepare the substrate according to the requirements.
- Prime with **HEGGEL Pox 416,** consumption 0.3 - 0.4 kg/m².
- Apply a scratch coat using **HEGGEL Pox 416** and **HEGGEL quartz sand-mix 2/1** (mixing ratio: 1.0: 0.5 up to 0.8 parts by weight).
- Apply coating **HEGGEL Pox 455** e.g., with a trowel, consumption 2.5 - 3.1 kg/m².
- Optionally the surface may be scattered and sealed.

Anti-Skid Coating

- Test and prepare the substrate according to the requirements.
- Prime with **HEGGEL Pox 416,** consumption 0.3 - 0.4 kg/m².
- Apply a scratch coat, if necessary, using **HEGGEL Pox 416** and **HEGGEL quartz sand-mix 2/1** (mixing ratio: 1.0: 0.5 up to 0.8 parts by weight).
- Apply coat, e.g., **HEGGEL Pox 455** in layers of 1.5 mm and scatter holohedral with fire-dried quartz sand, grain size 0.3/0.8 mm or 0.7 / 1.2 mm.
- After curing sweep off any excess material. Finish by light grinding so the peaks blunt (grain tips break).
  Vacuum thoroughly.
- Apply **HEGGEL Pox 455** with a rubber squeegee, distribute with criss-cross strokes using a velour roller. Consumption 0.750 - 1.000 kg/m². Meter the consumption rate carefully and avoid ponding.
- A sealer may be additionally applied to deluster or improve the surface quality or chemical resistance.

2. Surface Preparation

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 coat **HEGGEL Pox 416.** 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. To improve adhesion, scatter the surface completely with 0.5 - 1.0 kg/m² 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 completely. Blend with a slow speed mixer (200 - 400 rpm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to principally empty the mixed coating mass into a clean container and mix briefly once again ("to repot").

Adding quartz-sand: Add after mixing the components. Suitable is quartz sand, grain size 0.1 - 0.3 mm. Do not use any quartz flour or blends of sand. The amount to be added depends on the thickness of layer, temperature and kind of sand. For 1 kg coating material **HEGGEL Pox 455** may usually be filled with quartz sand up to 0.5 kg for layers starting at 2 mm thickness. Adding sand is not recommended for thin coatings because self-levelling properties degrade.

4. Processing / Handling

Process the material immediately after mixing with a coating knife or trowel by applying an even layer on the prepared surface. Guide the trowel so an evenly consistent layer on the whole area is achieved. Control the thickness of layers. Replace worn out trowels in time. 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 15 - 20 minutes depending on temperature. Divide working areas before starting work and work "fresh-in-fresh" to avoid any shoulders. Do not scatter too early because of air venting, optimum point of time at 20°C is after 20 - 30 minutes.

Floor- and air-temperature must not fall below 10°C and humidity must not exceed 75 %. The difference in floor -and room-temperature must be less than 3 °C 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 for the first 7 days. Curing time applies to 20°C. 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 (surface and resistance).

5. Cleaning

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

6. Safety Measure

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: RE 1

7. 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

Title	Standards	Value	Unit
Viscosity (Components A + B)	DIN EN ISO 3219 (23 °C)	2400	mPas
Solid Content	HEGGEL-Method	100	%
Density (Components A + B)	DIN EN ISO 2811-2 (20 °C)	1.44	kg/L
Weight Loss	After 28 days	0.1	Weight %
Water Absorption	DIN 53495	< 0.2	Weight %
Bending Tensile Strength	DIN EN 196/1	40	N/mm²
Compressive Strength	DIN EN 196/1	90	N/mm²
Shore-Hardness D	DIN 53505 (after 7 days)	80	–
Abrasion (Taber)	ASTM D4060	50	mg

Note: Values achieved in sampling are average values. Variation in product specification is possible.

VOC-Contents

The product complies with the high requirements to low VOC-contents, as required for sustainable construction. Therefore, these values exceed by far the European Union directive 2004/42/EG (decopaint-directive).

Reference to		Max. Value	Actual Content
Directive 2004/42/EG Decopaint-directive	Component A	≤ 500 g/L	16 g/L
	Component B	≤ 500 g/L	0 g/L
DGNB German Sustainable Building Council	Components A + B	GISCODE RE 0/1	GISCODE RE 1
Minergie Eco® Quality standard of the “Minergie society “, Switzerland	Components A + B	< 1 (< 2) %	0.8%

Note: According to the decopaint-directive single components are used for the calculation. For the quality rating system for sustainable construction the mixture of both components in the correct mixing ratio is the determining factor.

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