

# HEGSEL® Pox 412

Moisture-Tolerant Epoxy Base Coat

*You Build, We Protect!*

**Description:**

**HEGSEL Pox 412** is a two-component epoxy resin. The material is highly moisture tolerant. **HEGSEL Pox 412** humidifies matt-damp surfaces, blocks water, and leads to excellent adhesion. In combination with the degreaser **HEGSEL DG 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 solid 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

**Applications:**

- 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.

**Application Data:**

<b>Mixing Ratio</b>	<b>Parts by Weight</b>	A : B = 100 : 60		
	<b>Parts by Volume</b>	A : B = 100 : 66		
<b>Processing Temperature</b>		Minimum 10°C (room -and floor- temperature)		
<b>Further Coatings</b>		After curing, but not longer than 48 hours at 20°C		
<b>Consumption</b>	<b>Base Coat</b>	Approx. 0.3 - 0.4 kg/m <sup>2</sup>		
	<b>Scratch Coat</b>	Approx. 0.4 - 0.6 kg/m <sup>2</sup>		
	<b>Mortar</b>	Approx. 0.150 - 0.300 kg/m <sup>2</sup> for each mm of layer		
<b>@Temperature</b>		<b>10°C</b>	<b>20°C</b>	<b>30°C</b>
<b>Curing Time</b>	<b>Accessibility</b>	24 - 48 hrs	12 - 15 hrs	8 - 12 hrs
	<b>Mechanical Load</b>	-	2 - 3 days	-
	<b>Chemical Load</b>	-	7 days	-
<b>Processing Time</b>		60 min	40 min	20 min

**Note:** Bring to a suitable working temperature (minimum 10 °C) before application.

**Technical Data:**

Title	Standard	Value	Unit
<b>Viscosity (Components A + B)</b>	DIN EN ISO 3219 (23°C)	950	mPas
<b>Solid Content</b>	HEGSEL-Method	> 99	Weight %
<b>Density (Components A + B)</b>	DIN EN ISO 2811-2 (20°C)	1.08	kg/L
<b>Weight Loss</b>	After 28 days	0.3	Weight %
<b>Water Absorption</b>	DIN 53495	< 0.2	Weight %
<b>Bending Tensile Strength</b>	DIN EN 196/1	> 25	N/mm <sup>2</sup>
<b>Compressive Strength</b>	DIN EN 196/1	> 70	N/mm <sup>2</sup>
<b>Shore-Hardness D</b>	DIN 53505 (after 7 days)	82	-
<b>Adhesive Tensile Strength</b>	DIN EN 1542	> 1.5	N/mm <sup>2</sup>

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

**Packaging:**

Hobbock-Combi 30 kg

**Storage:**

12 months in sealed original containers under dry and cool conditions between 10 - 20 °C. Tightly re-seal opened containers and use the content as soon as possible. Protect from heat and freeze!

## 1. 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. **HEGGEL Pox 412** can be used as a bonding course on pale-damp substrate after degreasing with **HEGGEL DG 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/mm<sup>2</sup>. 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 **HEGGEL Pox 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 HEGGEL 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. Component A has sufficient volume for the entire trading unit.

Decant the hardener 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 empty the resin/hardener mixture into a clean container and mix briefly once again ("to repot").

Producing scratch coats:

1.0 kg **HEGGEL Pox 412**

0.5 - 0.8 kg **HEGGEL 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 and humidity must not exceed 75 %. The difference in floor -and room-temperature must be less than 3 °C so that 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. 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 HEGGEL-Base coats **HEGGEL Pox 411** or **HEGGEL Pox 481** in combination with quartz sand e.g., **HEGGEL quartz sand-mix 1** or **HEGGEL 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. Safety Measure

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

**GISCODE (05/2018 modification): RE 30**

## 6. 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.

**HEGGEL Pox 412**; Revision No: 1.10 / Last Revision Date: 18.09.2023

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 latest 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.

**HEGGEL GmbH**

Huttropstr. 60  
45138 Essen  
Germany

Tel: +49 201 17003 270

Fax: +49 201 17003 277

E-Mail: [info@heggel.de](mailto:info@heggel.de)

Web: [www.heggel.de](http://www.heggel.de)