

# HEGGEL Pox 411

2-component epoxy resin as base coat, filler, and reactive resin mortar

**Description:**

**HEGGEL Pox 411** is an unfilled, low-viscosity, and non-pigmented epoxy resin for base coats, scratch coats, and heavy-layered levelling screeds.

**HEGGEL Pox 411** features good wettability properties and may be filled up to a high grade. Nevertheless it offers good processing properties.

**HEGGEL Pox 411** cures very well and consistently, and features good adhesion to mineral substrate. To improve interlayer adhesion it is basically recommended to scatter with fire-dried quartz sand, grain size 0.3/0.8 mm.

**Characteristics:**

- High solids content
- Economical
- Low shrinkage
- Low viscosity
- All-purpose
- Resistant to hydrolysis and saponification
- Free of deleterious substances against varnish

**Application:**

- Base coat before the application of coatings.
- Scratch coat for sealing and levelling.
- Repair-, levelling-, and underlayment mortar.
- Assembly- and grouting work.

**Technical data:**

Mixing ratio	Parts by weight Parts by volume	A : B = 3 : 1 A : B = 100 : 37
Processing time:	Temperature Time	10 °C / 50 °F 20 °C / 68 °F 30 °C / 86 °F 70 minutes 40 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 - 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 <sup>2</sup>
	Scratch coat	Approx. 0.4 - 0.6 kg/m <sup>2</sup>
	Mortar	Approx. 0.150 - 0.300 kg/m <sup>2</sup> 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. Suitable surfaces are concrete C20/25 (B 25), cement screed CT-C35-F5 (ZE 30), as well as other adequately sound surfaces. The substrate has to have adequately high strength for the proposed occupational use. Coating of mastic asphalt with epoxy resin is not recommended. 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. Reconstructing floors may need special procedures. Obtain technical advice.

## 2. Mixing

Single packages of the components need to be measured 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 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 and mortar:

### Scratch coats:

1.0 kg **HEGGEL Pox 411**

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

### Epoxy resin mortar:

1.0 kg **HEGGEL Pox 411**

8.0 - 12.0 kg **HEGGEL quartz sand-mix 1**

Before adding additives, pre-mix the binding agent. Then add the additive. 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, using a coating knife, trowel, or nylon roller. Apply an evenly closed coat on the substrate. On highly absorbent surfaces a second coat or a saturated scratch coat is recommended to achieve a compact surface. For optimum adhesion scatter the fresh surface with approx. 0.8 kg/m<sup>2</sup> quartz sand (grain size 0.3/0.8 mm). This is mandatory if the subsequent coatings will be applied later than 48 hours after base coat application.

**Scratch coat:** For smoothing the substrate, as well as pore sealing apply a scratch coat. 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.

**Epoxy resin mortar: HEGGEL Pox 411** may be used as repair-, underlayment, and levelling mortar. Use the special resin **HEGGEL Pox 480** for industrial mortar coatings. Process immediately after mixing. Pull off with a lath, compact, and smooth with a smoothing trowel.

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.

**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-Primer resin 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. 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	750	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content		> 99	weight-%	HEGSEL-Method
Density	Components A + B	1.09	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/mm <sup>2</sup>	DIN EN 196/1
Compressive strength		> 70	N/mm <sup>2</sup>	DIN EN 196/1
Shore-hardness D		80	-	DIN 53505 (after 7 days)
Adhesive tensile strength		> 1.5	N/mm <sup>2</sup>	DIN EN ISO 1542

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

**HEGSEL Pox 411**; Revision No: 1.00 / Last Revision Date: 20.10.2020

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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