

## HEGSEL® Pox 420

Self-Levelling Epoxy Resin Coating

## HEGSEL® Pox 420 RAPID

Rapid-Setting, Self-Levelling Epoxy Resin Coating

### Description:

**HEGSEL Pox 420** and **HEGSEL Pox 420 RAPID** are solvent-free, self-levelling, two-component, epoxy resin coatings for hard and smooth surface finishes, as well as for scattered, slip resistant finishes. Especially suitable for industrial areas. The material offers excellent self-levelling and smoothing properties.

**HEGSEL Pox 420** offers regular processing and curing time. **HEGSEL Pox 420 RAPID** offers the more rapid curing alternative. Both coating materials may be filled with quartz sand (grain size 0.1 / 0.3 mm), beneficial and economical for layers above 2 mm.

Both high-quality standard materials offer well-balanced properties.

The cured coating offers very good resistance to mechanical load and good resistance to different chemicals. The coating is resistant to water, salts, salt solutions, alkalis and bases, as well as diluted mineral acids, such as hydrochloric and sulphuric acid. Good resistance to many solvents such as benzene, fuel, grease, oil, and so on. Limited resistance to concentrated mineral acids, diluted organic acids such as acetic acid, lactic acid, and so on. Not permanently resistant to chlorinated hydrocarbons, ester, concentrated nitric acid, and so on. Please obtain advice for any special requirements to resistance.

**HEGSEL Pox 420** and **HEGSEL Pox 420 RAPID** can be supplied in a variety of colours although slight colour deviations may occur due to technical reasons. Epoxy resin coatings are subject to colour changes which may become visible when using pale colours and the rapid-setting version.

### Characteristics:

- Good self-levelling properties
- Fillable with sand
- Abrasion resistant
- Coloured, glossy surfaces
- Resistant to water and chemicals
- Only slightly yellowing
- Standard and rapid-setting
- Solvent-free

### Applications:

- Commercially used areas with medium mechanical load, e.g. production and storage areas in many industrial sectors (2 mm coating).
- Commercially used areas with high mechanical load, e.g. production and storage areas in many industrial sectors (3 - 4 mm coating).
- Areas with increased exposure to chemicals and water.
- Base-coat for scattered coatings with layers of 2 - 4 mm (top-coat with **HEGSEL Pox 477**).
- Coloured wear-coat for decorative finishes scattered with coloured sand and subsequent sealing, e.g. with **HEGSEL Pox 476**, **HEGSEL Pox 465**, **HEGSEL Pox 479**, and so on.

### 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

- Apply a base coat with one of the recommended HEGGEL-Base Coats, like **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 412**, **HEGGEL Pox 413**, or **HEGGEL Pox 415**, consumption approx. 0.3 - 0.4 kg/m<sup>2</sup>, depending on the substrate.
- Apply a scratch coat for a planar substrate, e.g. with **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 415**, and **HEGGEL quartz sand-mix 2/1** mixing ratio approx. 1 : 0.8 parts by weight, consumption approx. 1.0 kg/m<sup>2</sup>.
- Apply **HEGGEL Pox 420** or **HEGGEL Pox 420 RAPID** with a notched trowel, consumption approx. 2.7 - 2.9 kg/m<sup>2</sup> for 2 mm layers.
- Optional: Scatter with silicium carbide, delustering agent, or decorative chips (flakes).
- Seal the surface with a suitable silk or matt sealer, such as **HEGGEL Pox 470**, **HEGGEL Flex 530**, **HEGGEL Flex 533**, or **HEGGEL Flex 535**.

### Slip Resistant Coating R11/12

- Apply a base coat with the recommended HEGGEL-Base Coat, like **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 412**, **HEGGEL Pox 413**, or **HEGGEL Pox 415**, consumption approx. 0.3 - 0.4 kg/m<sup>2</sup>, depending on the substrate.
- If required: Apply a scratch coat for a planar substrate, e.g. with **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 415**, and **HEGGEL quartz sand-mix 2/1** mixing ratio approx. 1 : 0.8 parts by weight, consumption approx. 1.0 kg/m<sup>2</sup>.
- Apply the coating with e.g. **HEGGEL Pox 420** or **HEGGEL Pox 420 RAPID** in layers of 1.5 - 2.0 mm and scatter the whole surface with quartz sand 0.3/0.8 mm or 0.7 / 1.2 mm.
- After curing, sweep off any excess sand and carefully vacuum until no more sand is released.
- Apply **HEGGEL Pox 477** or **HEGGEL Pox 478** with a rubber squeegee and distribute with a velour roller using criss-cross strokes. Consumption 0.5 - 0.6 kg/m<sup>2</sup>. It is mandatory to stay within the recommended consumption for slip resistance.
- Optionally, an additional coat can be applied for a matt effect, to improve 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 HEGGEL-Base Coats like e.g. **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 412**, **HEGGEL Pox 413**, or **HEGGEL Pox 415**. 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 moisture. The possibility of moisture ingress from the rear must be permanently excluded. Base coats may not rest longer than 2 days or have to 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. It is recommended to apply a scratch coat. 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

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 homogeneous mixture, free of streaks. To avoid mixing errors it is recommended to principally empty the resin/hardener-mixture into a clean container and mix briefly once again ("repot").

**Addition of quartz sand:** Add the additive after the components have been pre-mixed. Suitable is quartz sand, grain size 0.1/0.3 mm. Do not use quartz flour or sand blends. The added quantity depends on thickness, temperature, and type of sand. **HEGGEL Pox 420** can normally be mixed with up to 0.5 kg quartz sand per 1 kg of coating material. For thin coats, the addition of sand cannot be recommended as the self-levelling properties will change.

## 4. Processing / Handling

After mixing, process immediately with a coating knife or toothed trowel by pulling out 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 when using **HEGGEL Pox 420**. Optimum point of time at 20°C is after 10 - 15 minutes. Floor- and air-temperature must not fall below 10°C when using **HEGGEL Pox 420** and 5°C when using **HEGGEL Pox 420 RAPID** and/or 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, when using **HEGGEL Pox 420**, for the first 4 days when using **HEGGEL Pox 420 RAPID**. 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 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. 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.

## Application Data

Mixing Ratio	HEGSEL Flex 420	Parts by Weight Parts by Volume	A : B = 4 : 1 A : B = 100 : 38		
	HEGSEL Flex 420 RAPID	Parts by Weight Parts by Volume	A : B = 4 : 1 A : B = 100 : 38		
Processing Temperature		HEGSEL Pox 420	Minimum 10°C (Room -and floor- temperature)		
		HEGSEL Pox 420 RAPID	Minimum 5°C (Room -and floor- temperature)		
Further Coatings		HEGSEL Pox 420	When set to accept foot traffic, but not longer than 36 hours at 20°C		
		HEGSEL Pox 420 RAPID	When set to accept foot traffic, but not longer than 20 hours at 20°C		
Consumption		Approx. 1.4 - 1.6 kg/m <sup>2</sup> for each mm of layer, recommended thickness of layer: 1.5 - 3 mm			
Colours		Colours upon request!			
		@Temperature	10°C	20°C	30°C
Processing Time		HEGSEL Pox 420	90 min	35 min	20 min
		HEGSEL Pox 420 RAPID	45 min	20 min	10 min
Curing Time	Accessibility	HEGSEL Pox 420	24 - 36 hrs	14 -18 hrs	10 - 14 hrs
		HEGSEL Pox 420 RAPID	12 - 18 hrs	6 - 8 hrs	4 - 6 hrs
	Mechanical Load	HEGSEL Pox 420	-	2 - 3 days	-
		HEGSEL Pox 420 RAPID	-	5 - 18 hrs	-
	Chemical Load	HEGSEL Pox 420	-	7 days	-
		HEGSEL Pox 420 RAPID	-	4 days	-

## Technical Data

Title	Standard	Value		Unit
		HEGSEL Pox 420	HEGSEL Pox 420 RAPID	
Viscosity (A+B)	DIN EN ISO 3219 (23°C)	2600	2300	mPas
Density (A+B)	DIN EN ISO 2811-2 (20°C)	1.48	1.43	kg/L
Water Absorption	DIN 53495	< 0.2	< 0.2	Weight %
Bending Tensile Strength	DIN EN 196/1	> 30	> 30	N/mm <sup>2</sup>
Compressive Strength	DIN EN 196/1	> 70	> 70	N/mm <sup>2</sup>
Shore-Hardness D	DIN 53505 (after 7 days)	80	80	-
Abrasion (Taber Abraser)	ASTM D4060	55	55	mg

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

HEGSEL Pox 420 / HEGSEL Pox 420 RAPID; 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.

**HEGSEL 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)