

HEGSEL Pox 460

Chemical-resistant, electrically conductive, 2-component epoxy resin coating

Description:

HEGSEL Pox 460 is a pigmented, solvent-free, electrically conductive 2-component epoxy resin flow coating with very good resistance to different chemicals.

The cured coating is especially suitable for commercially and industrially used areas with antistatic or electrically conductive flooring and the requirement to very good chemical resistance at the same time.

Due to the special conductive fiber technology even pale colours are available.

Suitable for many different industrially used areas, e.g. rooms with flammable fluids and chemicals requiring explosion protection. The smooth coating is suitable for production areas, factories, laboratories and other areas with increased exposure to chemicals.

HEGSEL Pox 460 offers good resistance to chemicals, e.g. different solvents, acids, bases, oil, grease, salt, and solutions. Please note the chart for resistance and seek advice to make sure that the coating is suitable for the desired requirements.

Note: Deviation in colour tone is possible due to the conductive adjustment of **HEGSEL Pox 460**. Chemically resistant coatings might show colour alterations due to aging and wear and tear which will not affect any other properties though.

Characteristics:

- Electrically conductive
- Good resistance to chemicals
- Good resistance to solvents
- Solvent-free
- Resistant to hydrolysis and saponification
- Pale, pigmented surface finish, hard and wear resistant
- Free of deleterious substances against varnish

Application:

- For electrically conductive, commercially used areas with special requirements to chemical resistance.
- For areas with an increased exposure to fluids and chemicals.
- For areas with special requirements to explosion protection to avoid electrostatic charging.

Technical data:

Mixing ratio	Parts by weight Parts by volume	A : B = 100 : 25 A : B = 100 : 41
Processing time	Temperature Time	10 °C / 50 °F 20 °C / 68 °F 30 °C / 86 °F 40 minutes 20 minutes 10 minutes
Processing temperature		Minimum 10 °C / 50 °F - Maximum 30 °C / 86 °F (room- and floor-temperature)
Curing time (Accessibility)	Temperature Time	10 °C / 50 °F 20 °C / 68 °F 30 °C / 86 °F 24 - 36 hrs. 14 - 18 hrs. 10 - 14 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 15 - 24 hours, but not longer than 48 hours at 20 °C / 68 °F
Consistency		Trowel consistency
Consumption		Approx. 2.4 - 2.6 kg/m ²
Electrical conductivity		Approx. 10 ⁶ Ohm (combined with HEGSEL Pox 418)
Test standard		DIN EN 1081, DIN EN 61340-4-1
Minimum thickness		1.4 - 1.8 mm
Addition of quartz sand		Not permissible
Packaging		Hobbock-Combi 30 kg
Colours		Colours upon request!
Colour deviation		Due to the conductive adjustment and technical reasons deviations in colour tone may occur.
Shelf life		12 months (originally sealed)

1. Build-up of Coats

- Apply base and scratch coat for a planar substrate.
- Glue **HEGGEL Copper Strips** for discharge in an imagined grid-pattern (every 6 - 8 m, up to 1 - 2 m into the room) in place. Earth-connection by an electrician according to VDE-regulations.
- Apply a lateral conductive layer using approx. 0.100 - 0.140 kg/m² of **HEGGEL Pox 418**.
- Trowel-apply the conductive wear coat **HEGGEL Pox 460** with a notched trowel, consumption approx. 2.5 kg/m².

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 HEGGEL-Base Coats, like e.g. **HEGGEL Pox 410**, **HEGGEL Pox 411**, **HEGGEL Pox 412** or **HEGGEL Pox 415**. The substrate to be coated should be prepared mechanically, preferably by shot-blasting. The surface has to be prepared 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 approx. 0.5 - 1.0 kg/m² quartz sand, grain size 0.3/0.8 mm. Conductive coatings

have to be applied in the required thickness of layers. Therefore it is mandatory to prepare the substrate accurately and to apply a scratch coat.

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

4. Processing / Handling

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 flow-properties and removing any air blows, it is recommended to roll with a spiked roller. Use the spiked roller time-delayed, after 10 - 15 minutes. Divide working areas before starting work and always work "fresh-in- fresh" to avoid any shoulders. It is not recommended to scatter electrically conductive coatings because the electrical conductivity may be reduced.

Floor- and air-temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. Material has to have room temperature for processing. The difference in dew- point temperature and temperature of the substrate has to be more 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 and chemicals has to be avoided for 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. Stay within the recommended conditions during processing. 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 **V40** 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	2950	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid contents		> 99	%	HEGGEL-Method
Density	Components A + B	1.60	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 53515
Shore-hardness D		69	-	DIN 53505 (7 days)
Abrasion (Taber Abraser)		55	mg	ASTM D4060
Bleeder resistance		Approx. 10 ⁶	Ohm	DIN EN 61340-4-1

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

HEGGEL Pox 460; 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.

HEGGEL GmbH

Huttropstr. 60
45138 Essen
Germany

Tel: +49 201 17003 270

Fax: +49 201 17003 277

E-Mail: info@heggel.de

Web: www.heggel.de