

HEGSEL® Pox 445

Self-Levelling Epoxy Resin Based Sealing Coating

You Build, We Protect!

Description:

HEGSEL Pox 445 is a self-levelling, crack-bridging epoxy resin coating system with excellent chemical resistance, specifically developed as a sealing layer for concrete surfaces.

The fully cured coating system is trafficable and provides high durability combined with excellent chemical resistance to fats, oils, solvents, acids, and alkalis, making it suitable for a wide range of industrial applications in both indoor and outdoor environments.

Characteristics:

- Self-levelling application
- Suitable for traffic with pneumatic, solid rubber, Vulkollan, and polyamide tyres
- Complies with highest VOC emission standards
- Good crack-bridging capability depending on layer thickness
- Very good resistance to acids, alkalis, oils, fats, and solvents
- Jointless, smooth and uniform colour surface finish
- Low-emission system suitable for indoor use
- Temperature resistant up to approx. 50 °C (short-term up to 100 °C)

Application Areas:

HEGSEL Pox 445 is designed for use on industrial zones and in chemical processing areas. The system can be applied as a protective sealing layer under tile or brick lining systems, as well as for wall and floor applications requiring crack-bridging performance, for both indoor and outdoor use.

Application Data:

Finish	Smooth			
Colours	Plain colour (Colours on request!) <i>Note: Slight deviations from the RAL colour standard may occur.</i>			
Temperature	10 °C	20 °C	30 °C	
Pot Life	70 min	30 min	20 min	
Curing Time	Walkable	24 hrs	16 hrs	10 hrs
	Mechanical Load	-	7 days	-
	Chemical Load	-	7 days	-
Until Further Processing	< 72 hrs	< 48 hrs	< 16 hrs	

Packaging:

The products are supplied in the following standard package sizes:

Product	Size	Package
HEGSEL Pox 445 Solution	25 kg	Hobbock
HEGSEL Pox 445 Solution	16 kg	Hobbock
HEGSEL Pox 445 Hardener	8.8 kg	Drum
HEGSEL Pox 445 Hardener	25 kg	Hobbock
HEGSEL Pox 445 Top Coat Solution RAL 7030	20 kg	Hobbock
HEGSEL Pox 445 Top Coat Solution RAL 7032	20 kg	Hobbock
HEGSEL Filler 20	25 kg	Bag
PE Fibre 92	10 kg	Bag

Storage:

Shelf life of all components is approximately 24 months when unopened in the original drums and stored under dry, cool conditions below 20 °C. Higher temperatures by storage and transport would reduce the shelf life, whereas lower temperatures would extend the minimum shelf life.

Protect from heat and freeze!

1. Surface Preparation

The substrate to be coated has to be prepared in accordance with DIN EN 14879-1. It must be dry, clean, and free from cement laitance, cement skin, loose and friable parts, structural defects, and any substances impairing adhesion.

To achieve sufficient adhesive tensile strength, the surface must be mechanically pre-treated using suitable methods. The residual moisture of cementitious substrates must not exceed 4%.

The condition of the substrate has to be inspected and documented prior to application.

2. Environmental conditions

Environmental Conditions	Value
Optimal Temperature	20 °C
Application Temperature	10 °C up to 30 °C
Dew Point Distance	min. 3°C
Dew Point Distance from 70% air humidity	min. 5°C

The recommended application temperature is approximately 20 °C. Higher or lower temperatures will influence the pot life and rheological behaviour of the mixture. Exposure to draughts and direct sunlight must be avoided.

3. Mixing

Mixing Ratios:

HEGGEL Pox 445 Primer:

HEGGEL Pox 445 Primer	Parts by Weight
HEGGEL Pox 445 Solution	1.80 kg
HEGGEL Pox 445 Hardener	1.00 kg

HEGGEL Pox 445 Scraper Coat:

HEGGEL Pox 445 Scraper Coat	Parts by Weight
HEGGEL Pox 445 Solution	1.80 kg
HEGGEL Pox 445 Hardener	1.00 kg
HEGGEL Filler 20	4.50 kg

HEGGEL Pox 445 Top Coat (Floor)

HEGGEL Pox 445 Top Coat (Floor)	Parts by Weight
HEGGEL Pox 445 Top Coat Solution	4.00 kg
HEGGEL Pox 445 Hardener	1.76 kg
PE Fibre 92 (Addition of thixotropic agent for soil slopes > 2 %)	0.03 kg

HEGGEL Pox 445 Top Coat (Wall)

HEGGEL Pox 445 Top Coat (Wall)	Parts by Weight
HEGGEL Pox 445 Top Coat Solution	4.00 kg
HEGGEL Pox 445 Hardener	1.76 kg
PE Fibre 92	0.24 kg

4. Application

During application, the substrate must be kept dry. Any contact with moisture, such as condensation or mist, must be strictly avoided, as it may adversely affect the application and performance of the coating. Process the material immediately after mixing.

Note: The requirement for an electrostatically dissipative coating system shall be determined on a project-specific basis.

5. System Build-up

System design for Floor coating is as follows (Total thickness ~ 2.1 mm or 1.7 mm):

HEGGEL Pox 445 Primer

HEGGEL Pox 445 Scraper Coat (if required)

HEGGEL Pox 445 Top Coat (Floor)

- Prime with the **HEGGEL Pox 445 Primer** in one layer. Consumption ~ 0.25 kg/m²; coverage area per mix is ~ 11.2 m².
- Apply a scraper coat using **HEGGEL Pox 445 Scraper Coat** in one layer to achieve a level substrate. Consumption ~ 1.55 kg/m² @ 1 mm; coverage area per mix is ~ 4.7 m² @ 1 mm depending on the substrate condition.
- For floor areas, apply **HEGGEL Pox 445 Top Coat (Floor)** as the final coat in a

single layer. Consumption ~ 1.800 kg/m² @ 1.6 mm layer thickness and ~ 2.300 kg/m² @ 2 mm thickness. Coverage area per mix (three components) is ~ 16 m² at 1.6 mm and 12.5 m² at 2.0 mm.

System design for wall coating is as follows (Total thickness is ~ 3.1 mm):

HEGGEL Pox 445 Primer

HEGGEL Pox 445 Top Coat (Wall)

- Prime with the **HEGGEL Pox 445 primer** in one layer. Consumption ~ 0.25 kg/m²; coverage per mix is ~ 11.2 m².
- Apply **HEGGEL Pox 445 Top Coat (Wall)** as the final coat in two layers. Consumption ~ 3.300 kg/m². Coverage area per mix (three components): ~ 3.6 m² per application layer. Application is carried out in two layers of approx. 1.5 mm each, achieving a total thickness of approx. 3.0 mm.

6. Cleaning

To remove fresh contamination and clean tools, use **HEGGEL Cleaner** immediately. Cleaning shall only be carried out in well-ventilated areas. Hardened material can only be removed mechanically.

7. Safety Measures

The product is regulated as a hazardous material. Ensure good ventilation, especially in confined spaces. No smoking or open flames. Use appropriate protective gear. If it contacts skin or eyes, rinse with plenty of water and seek medical advice if needed. Avoid ingestion and keep away from ignition sources. Use residual material where possible. Do not dispose of it via drains or general waste; collect waste in sealed, labelled containers.

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

Technical Data

Title	Standard		Value
	DIN	ASTM	
Density (Mix)	DIN EN ISO 1183-1	ASTM D792	1.14 g/cm ³
Tensile Strength	DIN EN ISO 527	-	35 MPa (after heat treatment)
Modulus of Elasticity	DIN EN ISO 178	ASTM C580	500 MPa (after heat treatment)
Shore D Hardness	DIN ISO 7619	ASTM D2240	75
Abrasion Resistance	-	ASTM D4060 (Taber Disc CS 17)	42 mg/1000 turns
Crack Bridging Capability	-	-	0.3 mm @ 1.6 mm thickness 0.5 mm @ 2.0 mm thickness
Thermal Resistance	-	-	Continuous: 50 °C / Short-term: 100 °C

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

HEGGEL Pox 445; Revision No: 0.00 / Last Revision Date: 18.02.2026

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.

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