

HEGGEL® Pox 423

Self-Levelling Epoxy Resin Based Floor Coating

You Build, We Protect!

Description:

HEGGEL Pox 423 is a two-component very low emission epoxy floor coating. It is easy to apply due to self-levelling properties. When used in combination with HEGGEL Pox primers and HEGGEL Flex topcoats, a high-quality and visually appealing flooring system can be created on cementitious substrates, offering excellent chemical and mechanical resistance. **HEGGEL Pox 423** meets the strictest criteria regarding the lowest emissions of indoor air pollutants.

Characteristics:

- Excellent mechanical resistance
- Very high chemical resistance
- Self-levelling properties
- Tough-hard
- Inert and harmless once cured
- High abrasion resistance
- VOC < 500 g/l

Application Areas:

HEGGEL Pox 423 can be applied in industrial areas, production plants, sales areas, warehouses as well as public buildings, schools, hospitals, shopping malls and other indoor projects with high requirements to room climate.

Application Data:

Mixing Ratio (Parts by Weight)	A : B = 100 : 20 (5 : 1)		
Colour	Pebble grey (RAL 7032) Other colours are available on request		
Consumption	1.8 - 3.0 kg/m ² Note: Additional filling with e.g. quartz sand Ø 0.1 - 0.3 mm is possible		
@Temperature	12°C	23°C	30°C
Pot Life	~ 60 min	~ 30 min	~ 20 min
Curing Time (Foot Traffic)	48 hrs.	24 hrs.	20 hrs.
Curing Time (Mechanical Load)	96 hrs.	72 hrs.	48 hrs.
Curing Time (Chemical Load)	14 days	7 days	5 days

Note 1: All above values are approximate and may be used as a guideline for specifications
Note 2: Slight colour / batch differences may occur due to material and production variations.

Technical Data:

Title	Standard	Value
Density (Mix)	@23°C	~ 1.6 g/cm ³
Solids Content	-	~ 100%
Viscosity (Mix)	@23°C	~ 2000 ± 300 mPa.s
Compressive Strength	DIN EN ISO 604	60 - 80 MPa
Tensile Strength	DIN EN ISO 178	~ 45 MPa
Linear Shrinkage	-	< 0.12%
Shore D - Hardness	DIN EN ISO 868	~ 80 - 85
Abrasion Resistance	ASTM D4060 (Taber /1000 g / 1000 rev.)	~ 50 mg weight loss
Temperature Resistance	-	Wet: Max 40°C continuously, Short-term up to +60°C

Packaging:

30 kg pails (25 kg part A +5 kg part B)

Storage:

12 months, sealed in original containers under dry conditions and a temperature of 15 - 25°C. Crystallization may occur at temperatures below 10°C. Please consult HEGGEL!

1. Surface Preparation

Before application, the substrate must be prepared mechanically using qualified equipment of shot blasting. The substrate must meet the following minimum requirements: it should be free of cement laitance, dust, oil, fat, and other contaminants, have an open textured and absorbent surface, a pull-off strength of at least 1.5 MPa, and a concrete residual moisture content of no more than 4%.

Depending on the condition of the substrate, the surface must be made non-porous by applying a primer and / or key coat using **HEGGEL Pox 483**, followed by a light broadcast of clean, dry quartz sand.

For concrete surfaces with rising damp, residual moisture, or a maximum moisture content of 6%, **HEGGEL Pox 486** must be used. Please consult HEGGEL for guidance.

Once cured, carefully remove any excess sand.

2. Environment Conditions

Before, during, and after application, the substrate temperature must be at least 3°C above the current dew point and should range between 12°C and 30°C. Additionally, ensure that the relative humidity is below 75% at 12°C and below 85% at temperatures above 23°C throughout surface preparation, application, and curing processes.

3. Application Tools

- Notched trowel (rubber or metal)
- Nylon roller
- Spiked roller
- Electric mixer

4. Mixing

Before mixing, ensure that all components are at a temperature between 15°C and 25°C. Mix the components in the correct ratio using a suitable low-speed electric mixer (300-400 rpm) for at least 3 minutes, or until a completely homogeneous and uniform mixture is achieved. Then, transfer the mixed material into a clean container and mix for an additional minute. **HEGGEL Pox 423** can be applied either as a pure product or blended with clean, dry, tempered quartz sand (Ø 0.1–0.3 mm). The mixing ratio (by weight) depends on the specific use and application requirements. After mixing, fillers may be added gradually while stirring continuously.

5. Application

Immediately distribute the mixture onto the surface. Apply the mixture using a notched trowel or scraper (rubber or metal), spreading it evenly to ensure a uniform layer. Within 5 minutes of application, the fresh coating must be finished with a spiked roller to eliminate air bubbles and achieve a smooth surface—this step is especially critical when the product is filled with quartz sand.

To enhance the visual appearance (e.g. reddish shades of grey), the coating should also be finished with a suitable nylon roller (e.g., 14 mm pile height).

6. System Description

The following figures apply to ambient and surface temperatures between 15°C and 23°C. Both higher and lower temperatures will affect the filler ratio, consumption per square meter and optic.

Primer:

HEGGEL Pox 483, clear

Consumption: approx. 0.3 - 0.5 kg/m², lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m²).

Key Coat:

HEGGEL Pox 483 + quartz sand

Consumption: approx. 0.6 kg/m² resin plus quartz sand, lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m²).

Self-levelling coating:

HEGGEL Pox 423, pebble grey

Consumption: approx. 1.8 - 3.0 kg/m²

System thickness: 2 - 3 mm.

It is possible to improve the visually appealing e.g. silk matt, glossy, smooth and anti-slip, by using both the clear and pigmented polyurethane topcoats. Topcoats also improve both the chemical and mechanical resistance (please consult HEGGEL).

Regular professional maintenance helps extend the service life of the flooring system.

Note: UV radiation can cause discoloration.

7. Chemical Resistance

HEGGEL Pox 423 offers excellent chemical resistance to water / sewage,

detergents and washing agents, saline solutions, dilute acids and alkalis, lubricants or fuels and solvents (Consult HEGGEL). See a list of tests carried out for 3 months at 20°C below (discolouration was not considered.)

- | | |
|-------------------------|---------------|
| • Acetic acid 2% | resistant |
| • Acetic acid 5% | short-term |
| • Ammonia 5% | resistant |
| • Boric acid 4% | resistant |
| • Chlorine bleach 6% | resistant |
| • Citric acid < 10% | resistant |
| • Distilled water | resistant |
| • Formaldehyde 37% | resistant |
| • Formic acid 2% | resistant |
| • Formic acid 5% | short-term |
| • Hydrochloric acid 10% | resistant |
| • Hydrochloric acid 30% | short-term |
| • Lactic acid 10% | resistant |
| • Methylene chloride | not resistant |
| • Nitric acid 10% | resistant |
| • Petrol / Super | resistant |
| • Phosphoric acid 25% | resistant |
| • Saline solution | resistant |
| • Sodium lye 50% | resistant |
| • Sulphuric acid 40% | short-term |
| • Tannic acid solution | resistant |
| • Xylene | resistant |

Note: short-term: remove immediately.

8. Safety Measures

Avoid inhaling vapours and prevent contact with skin. Wear appropriate protective clothing, gloves, and eye / face protection. Ensure adequate ventilation in the working area. In case of skin contact, wash immediately with plenty of soap and water. If contact occurs with the eyes, rinse thoroughly with plenty of water and seek medical attention. Do not eat, drink, or smoke while using the product, and keep away from sources of ignition.

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.

HEGGEL Pox 423; Revision No: 0.00 / Last Revision Date: 27.01.2025

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

Web: www.heggel.de