HEGGEL® Pox 498

High-build Zinc-rich Epoxy Primer

You Build, We Protect!

Description:

HEGGEL Pox 498 is a two-component, high-solid, high-build zinc-rich epoxy primer for blast-cleaned steel. It provides excellent corrosion protection. Applied to surfaces prepared to SA 2.5. Its formulation allows fast application and efficient handling. The coating can be applied up to 125 µm dry film thickness without risk of cracking or defects typically associated with zinc-rich primers.

Characteristics:

- Exceptional corrosion protection
- Outstanding barrier performance
- Remarkable adhesion strength
- Excellent film build on sharp edges
- Supplied ready for spray and fast curing
- Superior flexibility
- High-build zinc-rich primer with no mud cracking
- Alternative to galvanising and zinc silicate systems
- VOC ≤ 395 g/l

Application Areas:

HEGGEL Pox 498 is specifically formulated to protect SA 2.5 blast-cleaned steel structures exposed to corrosive environments.

Application Data:

Finish	Matt **Note:** The final gloss level is influenced by the substrate condition and applied film thickness, and may in some cases differ from the stated values.	
Colour	Greenish grey	
Mixing Ratio	Base : Activator = 4: 1 (Parts by volume)	
Theoretical Consumption	~ 0.18 l/m^2 @100 microns DFT	
Practical Consumption	For large areas: ~ 0.25 l/m^2 @ 100 microns DFT For small areas: ~ 0.35 l/m^2 @ 100 microns DFT **Note**: Performance in practice varies with site conditions; so, the stated coverage values should be used only as guidelines for airless spraying.	
Standard Dry Film Thickness (DFT)	60-125 micron (depends on application process)	
Temperature	**10 °C**	**20 °C**
Pot Life	-	6 hrs
Drying Time (Dust free)	45 min	25 min
Drying Time (Manageable)	6 hrs	3 hrs
Overcoat Interval	6 hrs	3 hrs

Note 1: All the provided values are approximate and should be used as guidelines for specifications.
Note 2: Drying times obtained using Activator at a nominal dry film thickness of 75 µm. At higher film thicknesses, longer drying times must be considered.
Note 3: The maximum overcoating interval is unrestricted, as long as the surface is clean and devoid of grease and oil.

Technical Data:

Title	Standard	Value
Solids Content (Mix)	-	~ 58 vol.%
Zinc Content	-	90 ± 1 wt.%
Density (Mix) @20 °C	-	~ 2.30 kg/l
Corrosion Resistance	Electrochemical Impedance Spectroscopy (EIS)	Rc = 3.7 × 10^9 Ω (after 21 days)
Salt Spray Resistance	ISO 9227 (NSS) / ASTM B117	> 1440 hrs
Pull-off Adhesion	ISO 4624 / ASTM D4541	Before salt spray: 4.2 MPa After salt spray: 3.8 MPa
Temperature Resistance	-	Dry heat: Up to 150 °C
Outdoor Exposure	ISO 2810	1.5 years

Note: Corrosion resistance tests were conducted on a multi-layer coating system and may not be representative of the primer when used alone.

Packaging:

10 litre cans
HEGGEL Pox 498 Thinner: 25 litre jerry cans

Storage:

12 months, in sealed original containers under dry and cool conditions, ideally between 5 – 40 °C. Protect from heat and freeze!

1. Surface Preparation

Steel: Steel surfaces shall be prepared to a cleanliness level of Sa 2½ in accordance with ISO 8501 1, with a blasting profile of 40–70 µm, or alternatively cleaned using power tools to a minimum standard of ISO St3 / SSPC SP3.

For untreated steel, surface preparation shall be carried out in accordance with ISO 12944-4 §6.2.3. All grease, oil, dirt, and other contaminants must first be removed using a suitable cleaning agent such as **HEGGEL Cleaners** applied with a high-pressure spraying pistol. The surface shall then be grit blasted to Sa 2½ according to ISO 8501-1. After blasting, all dust must be removed from the entire surface using clean, dry, oil-free compressed air. The first coating layer must be applied within 6 hours after blasting. If the final coating layer is to be applied on the construction site, additional precautions must be taken to maintain surface cleanliness and coating performance.

Hot dip galvanized: The surface must be prepared in accordance with ISO 12944-4, section 6.2.3.4.1 (sweep blasting with inert grit) and NEN 5254 for duplex systems. All grease, oil, and contaminants should be removed using a suitable cleaning agent like HEGGEL Cleaners. The entire galvanized surface must then be lightly sweep-blasted using an inert abrasive with a grain size of 0.3–0.5 mm, at a blasting pressure of 2.0–2.5 bar and a minimum nozzle diameter of 6 mm. After blasting, the surface should exhibit a uniform, matte appearance. Depending on the zinc coating thickness, a maximum of 5–10 µm of zinc may be removed, as specified in NEN 5254. Finally, remove all dust from the surface using clean, dry, oil-free compressed air. Apply first coating layer within 2 hours.

2. Environmental Conditions

Prior to, during, and after application of the coating, ensure that the substrate temperature is at least 3 °C above the dew point and the maximum relative humidity shall be below 80%. Furthermore, any contact with moisture must be avoided during application process.

3. Application Tools

Airless spray: Apply using standard airless spray equipment. Thin the material with **HEGGEL Pox 498 Thinner** at 0–5 by volume. Operate at a pressure range of 140–160 bar and a nozzle size of minimum 0.015 inch. The achievable dry film thickness is in the range of 60–125 µm.

Air mix: Application may be carried out using Air mix spray equipment. Thin the material with **HEGGEL Pox 498 Thinner** at 0–5 by volume. Maintain a flow pressure of 70–100 bar and use a nozzle size of minimum 0.015 inch. The recommended dry film thickness per coat is 60–125 µm.

4. Mixing

Thoroughly mix the base component and activator using a mechanical mixing device. Ensure the temperature of the mixed material is maintained at a minimum of 15 °C during application.

5. Application

The coating is preferably recommended to be applied using airless or air mix spray equipment. Brush application is only advised for touch up purposes.

The product can be applied without thinning when using airless spray equipment;

Apply uniformly to achieve required dry film thickness.

Where thinning is required, the amount of **HEGGEL Pox 498 Thinner** should be adjusted to 0–5 vol.% depending on the equipment used, application method, and temperature of the mixed material.

Note: Clean all equipment immediately after application using **HEGGEL Pox 498 Thinner**.

6. Chemical Resistance

According to ISO 2812-1 / ISO 2812-2 / ASTM D543: (indicative, based on immersion testing)

- Distilled water
- Sea water

7. Repairing Defects

Touch-up of damaged or untreated areas shall be carried out on site. Remove grease, oil, and dirt using a suitable cleaning agent, Like **HEGGEL Cleaners**. Remove rust from mechanically damaged areas, weld seams, weld spots, and heat-affected zones using rotating steel wire brushes, sanding discs, or coarse sandpaper to a minimum cleanliness grade St 3 in accordance with ISO 8501-1.

Smooth the transition between cleaned areas and adjacent intact coatings by sanding and scraping. After sanding, remove all dust using clean, dry, oil-free compressed air. Then repair the area using the complete coating system in accordance with the coating specification. Minor surface damage may be repaired using the top coat only.

Note: Regular cleaning of the surface is recommended. The coating system should be inspected annually for defects, and any damage shall be repaired using the original coating system.

8. Safety Measures

HEGGEL Pox 498 (UN number: 1263) is in accordance with EU Directive 67/548/EEC and applicable hazardous substances regulations.

Ensure adequate ventilation during application and drying to reduce solvent vapors. This is necessary to achieve proper drying conditions and to protect applicators' health. Causes skin and eye irritation and may be harmful if inhaled. In case of eye contact, immediately rinse thoroughly with water and seek medical attention. Do not eat, drink, or smoke while handling this product. Keep away from heat, sparks, and open flames.

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 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