HEGGEL® Coat 179

Inorganic Zinc-Rich Silicate Primer

You Build, We Protect!

Description:

HEGGEL Coat 179 is a two-component, inorganic zinc silicate anti-corrosive primer based on self-curing technology. The coating contains a high level of metallic zinc and provides durable corrosion protection combined with dry heat resistance up to 400 °C. The formulation allows efficient single-coat application while maintaining strong anti-corrosive performance.

Characteristics:

- Self-curing technology
- Suitable for heavy-duty industrial and marine environments
- Matt finish
- Dry heat-resistance up to 400 °C
- High zinc content
- VOC ≤ 530 g/l

Application Areas:

HEGGEL Coat 179 is suitable for use as an anti-corrosive primer on blast-cleaned steel structures exposed to heavy-duty industrial, marine, offshore, coastal, refinery, bridge, and power plant environments, including oil tanks and ballast tanks.

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	Grey			
Mixing Ratio	Base : Powder = 7: 3 (Parts by volume) Base : Powder = 8.75 : 25 (Parts by weight)			
Theoretical Consumption	~ 0.10 L/m^2 @ 50 microns DFT			
Practical Consumption	For large areas: ~ 0.14 L/m^2@ 50 microns DFT For small areas: ~ 0.20 L/m^2@ 50 microns DFT **Note**: Performance in practice varies with site conditions; so, the stated consumption values should be used only as guidelines for airless spraying.			
Standard Dry Film Thickness (DFT)	50-100 microns (depends on application process)			
Maximum Dry Film Thickness (DFT)	125 microns			
Temperature	**5 °C**	**10 °C**	**20 °C**	**30 °C**
Pot Life	**-**	**-**	7 hrs	**-**
Drying Time (Dust free)	40 min	30 min	20 min	10 min
Drying Time (Manageable)	6 hrs	5 hrs	4 hrs	3 hrs
Overcoat Interval	72 hrs	32 hrs	24 hrs	18 hrs

Note 1: All the provided values are approximate and should be used as guidelines for specifications.
Note 2: At higher dry film thicknesses, longer drying times must be considered.
Note 3: No maximum overcoating interval, provided the surface is clean, dry, and free from contaminants.

Technical Data:

Title	Standard	Value
Solids Content (Mix)	-	~ 50 vol.%
Density (Mix) @ 20 °C	-	~ 2.80 kg/L
Zinc Content	-	91 wt.%
Temperature Resistance	-	Dry heat: Up to 400 °C

Packaging:

20 litre cans
HEGGEL Coat 179 Thinner: 25 litre cans

Storage:

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

1. Surface Preparation

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 2.5 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 relative humidity shall remain between 55% and 95%. Ensure adequate ventilation during application and drying to facilitate solvent evaporation and proper curing.

3. Application Tools

Air spray: For effective application, use conventional air spray equipment. Thin the material with **HEGGEL Coat 179 Thinner** at 5–10% by volume. Maintain a flow pressure of 3–4 bar for optimal operation. Use a nozzle size of 2.0–3.0 mm. The achievable dry film thickness ranges from 50 to 100 µm.

Airless spray: Apply using standard airless spray equipment. Dilution with **HEGGEL Coat 179 Thinner** may be required at 0– 5% by volume, depending on application conditions. Operate at a pressure range of 140–160 bar and a nozzle size of 0.013– 0.015 inch is recommended. The resulting dry film thickness typically falls between 50 and 100 µm.

Air mix: Application may be carried out using Air mix spray equipment. Thin with **HEGGEL Coat 179 Thinner** at 0– 5% by volume. A working pressure of 70– 100 bar is recommended. Use a nozzle size of 0.013–0.015 inch. The recommended dry film thickness per coat is 50–100 µm.

Brush / Roller: Application by brush or roller may require thinning with **HEGGEL Coat 179 Brush Thinner** at 0- 5% by volume. Using this method, a typical dry film thickness of approximately 50 µm can be achieved.

4. Mixing

Thoroughly mix the base component and zinc powder using a mechanical mixing device. Ensure the temperature of the mixed material is maintained at a minimum of 10 °C during application.

5. Application

The coating is preferably recommended to be applied using airless or air mix spray equipment, as brush application may result in variations in film thickness and reduced flow properties.

The product may be applied with various spray systems depending on project conditions. Where required, the viscosity may be adjusted using **HEGGEL Coat 179** Thinner depending on equipment, application method, and temperature of the mixed material.

Apply uniformly to achieve required dry film thickness.

Note: Clean all equipment immediately after application using **HEGGEL Coat 179 Thinner.**

6. 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.

7. Safety Measures

HEGGEL Coat 179 (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.

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