HEGGEL® Coat 123

Advanced Novolac-Based Protective Coating

You Build, We Protect!

Description:

HEGGEL Coat 123 is a two-component superior protective coating based on an advanced Novolac-resin, reinforced with micro-ceramic particles. **HEGGEL Coat 123** offers exceptional corrosion and abrasion protection for diverse substrates in highly aggressive high-temperature environments.

Characteristics:

- Solvent-free
- High chemical resistance
- Superior abrasion resistance
- Single coat curing at ambient temperature
- Immersion service temperature resistance up to 120°C (Dependent on the chemical being used)
- Excellent weatherability
- Resistant against sea water in accordance with ISO 20340

Applications:

- Industrial and marine structures/Offshore platforms
- Water, seawater, brackish water equipment
- Flood gates, steel sheet piles and weir plants
- Crude oil, hydrocarbons, and chemicals storage tanks
- All types of process and pressure vessels
- Oil and gas pipelines

Application Data:

Mixing Ratio (Parts by weight)	A : B = 10 : 1		
Finish	Glossy		
Typical Dry Film Thickness (DFT)	Approx. 500-1000 microns (Please consult HEGGEL!)		
Theoretical Consumption	Approx. 0.8 kg/m^2 @500 microns DFT		
Sagging Limit	1000 µm per layer at 20 °C material temperature		
@Temperature	**20°C**	**30°C**	**40°C**
Pot Life	30 min	20 min	10 min
Curing Time (Accessibility)	24 hrs	18 hrs	12 hrs
Curing Time (Chemical Load)	7 days	3 days	2 days
Overcoat Duration Airless Spraying (wet on wet)	min. 10 hrs max. 96 hrs	min. 7 hrs max. 72 hrs	min. 5 hrs max. 48 hrs

Note 1: All the provided values are approximate and should be used as guidelines for specifications.
Note 2: Depending on the actual ambient temperature, the pot life may vary. Higher temperatures could shorten the pot life, while lower temperatures would prolong it. For further information, please consult HEGGEL!

Technical Data:

Title	Standard	Value	Unit
Mixed Density	-	1.65	g/cm^3
Solids Content	-	100	%
Adhesion Strength	ASTM D4541	> 24	MPa
Abrasion Resistance	ASTM D4060	< 65	mg loss
Flexural Strength	ASTM D790	47.5	MPa
Corrosion Resistance (Salt Spray)	ISO 7253	> 10,000	Hrs

Packaging:

16.5 kg kits (15 kg component A + 1.5 kg component B)

Storage:

Approx. 24 months, unopened in original drums under dry and cool conditions below 35ºC provided with adequate ventilation. Protect from heat and freeze!

1. Surface Preparation

The steel surface to be coated must be dry and free from mill scale, debris, grease, oil, dust, rust, and any other contaminants that could hinder adhesion (refer to DIN report 28). Welding beads should be eliminated and welding seams and overlaps must be smooth as per DIN EN 14879-1. Surface should be blast-cleaned with tough grit according to DIN EN 12944-4 (ISO 8501-1/-2 or SSPC-SP10), reaching preparation grade SA 2.5. Only approved angular-grain blasting abrasives are to be used, aiming for a sharp, angular surface profile with average roughness Rt 75-100 µm. In case of uncertainty, surface cleanliness should be tested for soluble contaminants following EN ISO 8502-6 (Bresle method) and EN ISO 8502-9 before coating.

Apply coating before steel oxidation. If oxidation occurs, reblast affected area to specified standard. Address surface defects revealed during blast cleaning appropriately.

2. Mixing

To ensure optimal performance of the product, thorough mixing is essential. Make sure both base and hardener components are kept between 20-30°C before mixing, and always keep the materials in a shaded area before, during and after mixing. Upon opening the base tin, any substance on the lid must be incorporated into the tin. Gradually incorporate the hardener into the base, ensuring a slow stirring motion by the power mixer, to achieve a thoroughly uniform mixture. After adding all the hardener to the base, increase power mixer speed and mix for an additional 2 minutes while firmly scraping the inner wall with a spatula or pallet knife to ensure thorough blending.

The usability of the mixed material lasts for a duration approximately equal to the pot life. Refrain from mixing a quantity of material that exceeds what can be used within the pot life span.

3. Environmental Conditions

Prior to the application of the coating make sure that the temperature of the substrate is between 10 - 40°C and minimum 3°C above the dew point in addition to ensuring the relative humidity being in the range under 85% before, during, and after surface preparation, application and curing process. In case the substrate's temperature falls below 10°C, it may be necessary to use external heating to elevate the ambient temperature and subsequently heat the substrate. For outdoor applications, create an enclosure around the equipment to be coated using plastic sheeting and then pump warm air into this enclosed area. Be careful to prevent recontamination of the surface which is prepared from close sources. Avoid applying the coating in windy conditions unless there is no other choice; in these instances, encase the equipment in plastic sheeting as mentioned earlier.

4. Application Method

Airless spraying

Use an airless pump with a gear ratio of 1:68 or greater, inlet pressure above 6 bar, tip size: 0.019-0.026”; maximum hose length: 20 m; spray hose diameter: up to 3/4”. We suggest eliminating the high-pressure filter and directly suctioning the material without a siphon tube.

Brush / Roller

For small areas, repairs, or edge pre-coating, utilizing a brush/roller is recommended. Achieving the desired layer thickness might demand multiple coating passes (wet-on-wet).

Note: Do not use thinners. We recommend to use HEGGEL cleaners to clean and flush equipment.

5. Application

Apply a stripe coat to corners, edges, and welds. Objects that are challenging to access must be thoroughly coated using a brush. Following the brush application, allow it to dry and then perform a sweep blast. Proceed to apply **HEGGEL Coat 123** onto the metal surfaces, ensuring all stripe coated regions are covered. Implement the specified film thickness in a single, uniform layer. Frequently monitor the wet film thickness with the help of a wet film thickness gauge. It is recommended to maintain a minimum spray temperature of 20°C for the material. Do not add any thinner to the coating.

The aforementioned details are merely recommendations and may be tailored according to the specific conditions of the project.

To clean and purge the spray equipment, we advise using HEGGEL cleaner.

6. Safety Measures

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