HEGGEL® Corr 218

Advanced Composite-Enhanced Corrosion Resistant Coating

You Build, We Protect!

Description:

HEGGEL Corr 218 is a state-of-the-art, two-component anti-corrosion coating utilizing advanced enhanced barrier technology. Delivering a smooth and glossy finish, it offers unparalleled resistance to aqueous environments at ambient temperatures. Its main role is to provide protection against exposure to seawater, offering extra advantages such as enhanced durability against turbulent flows and increased resistance to the stresses imposed by particles, specifically those of impact and abrasion.

Characteristics:

- Exceptional durability in seawater and other moderately corrosive acid or alkaline conditions
- Outstanding anti-fouling characteristics
- Solvent-free self-priming coating
- High resistance to abrasion
- Superior UV and weather resistance properties
- Strong adhesion to minimally prepared steel and concrete surfaces
- Protects stainless steel from corrosion

Application Areas:

- Cooling water pipes, spools, valves
- Subsea structures, piles, Buried flow lines
- Seawater intake valves
- General structural steel
- Girth welds
- Splash zone surfaces
- Substrates exposed to chlorinated and seawater at both ambient and elevated temperatures

Chemical Resistance:

- Sodium hypochlorite 15%
- Sour Crude, Kerosene
- Sulphuric acid 30%
- MEK, Toluene, Xylene, Acetone, Ammonia
- Hydrochloric acid 20%
- Nitric Acid 10%
- Glacial acetic 20%
- Phosphoric acid 50%

Application Data:

Finish	Smooth and Glossy		
Colour	On request!		
Number of Coats	1 - 2		
Typical Dry Film thickness (DFT)	300 - 2000 microns		
Typical DFT Specifications	For internals of equipment exposed to seawater / chemicals: 1 - 2 coats @ 1000 - 2000 microns total DFT		
	For externals of equipment exposed to seawater / chemicals: 1 - 2 coats @ 300 - 400 microns total DFT		
	For externals of equipment exposed to flowing seawater / entrained solids: 1 - 2 coats @ 800 - 1000 microns total DFT		
Practical Consumption	0.50 kg/m^2 @300 microns DFT		
@Temperature	**20°C**	**30°C**	**40°C**
Pot Life	85 min	65 min	55 min
Tack Free / Drying Time	240 min	-	-

Note 1: The practical consumption and DFT are subject to specific project conditions and will adjust accordingly to ensure optimal results. Please consult HEGGEL!
Note 2: All the provided values are approximate and should be used as guidelines for specifications.

Packaging:

3, 5, 10 and 20 kg kits

Storage:

+36 months in sealed original containers under dry and cool conditions.
Protect from heat and freeze!

1. Surface Preparation

For optimal long-term performance of this product, thorough surface preparation is crucial. Start by removing old coatings and surface corrosion. Follow this by cleaning with high-pressure water jetting to eliminate chemical contaminants and soluble salts from the surface.

Allow the substrate to dry, then manually prepare the surface to achieve a minimum profile of 40 microns and attain an SA 2 level of surface cleanliness. Remove any remaining dust and grit. Immediate coating of the prepared surface is crucial to prevent oxidation and contamination. Prevent the prepared surface from being contaminated again by nearby sources.

2. Mixing

To ensure optimal performance of the product, thorough mixing is essential. Ensure both the base and hardener components are above 20°C before mixing. 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 and continue mixing for an additional 2-3 minutes, while concurrently using a sturdy spatula or palette knife to scrape the interior walls of the container.

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 surface is no less than 15°C, the temperature of the air is at least 3°C above the dew point, and ensure the relative humidity is less than 95%. In case the substrate's temperature falls below 15°C, it may be necessary to use external heating to elevate the ambient temperature and subsequently heat the substrate. It is crucial to ensure that the temperature remains above 15°C during the initial 24 hours of curing. 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 Tools

Medium pile roller / Airless spray.

5. Application

Apply a stripe coat to corners, edges, and welds. Begin the application of **HEGGEL Corr 218** (Brush Grade) by firmly brushing it onto the substrate to ensure thorough wetting of the surface, gradually building up to the specified film thickness in the stated number of coats. Regularly monitor the wet film thickness using a wet film thickness gauge, especially on concrete substrates where dry film thickness measurements are not feasible. If a second coat is necessary, it can be applied once the previous coat has become tack-free. After completing the coating process, promptly clean the brush using MEK or acetone-based thinners.

6. Quality Control

24 hours after application on of the final coat, inspect the integrity of the applied coating utilizing a holiday detector, set at an operating voltage of 50V for every 25 microns of coating thickness. An inductance type electronic dry film thickness tester can be employed to provide a quantitative assessment of the dry coating thickness.

7. Repairing Defects

If the coating has been applied 25% beneath specification, repairs should be made. Use a distinctive marker pen to identify pinholes, misses, and areas with thin coating for repair. Any loose material surrounding the defect must be removed to leave behind firmly adhered coating. Before starting the repair application, roughen the defective area. It is also imperative to roughen a 5cm margin of the surrounding intact coating to create a rough surface for the repair overlap. Prior to applying the repair of **HEGGEL Corr 218** clean the prepared area with xylene. Apply the repair mix firmly into the surface profile with the brush to guarantee complete wet out, subsequently building to the specified thickness.

8. Cure Schedule

After approximately 240 minutes, the applied coating will be touch dry at 20°C. A minimum curing period of 3-4 days should be allowed before exposure to environment and chemical loads.

9. 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.

Technical Data

Title	Standard	Value	Unit
Solids Content	-	100%	-
Mixed Viscosity	-	30,000 ± 5,000	cPoise
Density (Base + Hardener)	-	1.35	g/cm^3
Elongation to Break	BS 6319, Part 7, 1985	5.0	%
Adhesion Strength (Cohesive failure)	ASTM D4541	18.63	MPa
Compressive Strength	BS 6319, Part 2, 1983	85.32	MPa
Tensile Strength	BS 6319, Part 7, 1985	29.42	MPa
Impact Resistance	ASTM G14	Forward: 18 Reverse: 7	Joules
Temperature Resistance	NACE TM0174	Immersed: +80 Non-Immersed: +120	°C
Abrasion Resistance	ASTM D4060 (Taber CS-17/1kg/1000 cycles)	12	mg weight loss

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