

# HEGSEL® Corr 230

High-Temperature Advanced Anti-Corrosion Coating

*You Build, We Protect!*

**Description:**

**HEGSEL Corr 230** is an advanced two-component ceramic coating with superior high-temperature resistance and anti-corrosion properties. It exhibits exceptional adhesion to both metallic and refractory surfaces, making it an ideal choice for a wide range of applications. It is advised not to use this coating for applications involving full immersion services.

**Characteristics:**

- Continuous temperature resistance up to +550°C
- Resistant against thermal cycling
- Withstands salt spray exposure.
- Exceptional resistance to thermal shock
- Self-priming, Single-Coat application
- UV resistant

**Application Areas:**

- Exhaust vents
- Stacks
- Structures operating at high temperature.
- Generators
- Turbines
- Heat exchangers

**Chemical Resistance:**

Water, Algae, oil, grease, weak acids and alkalis

**Application Data:**

<b>Finish</b>	Textured and semi-gloss		
<b>Colour</b>	White (others available on request)		
<b>Number of Coats</b>	1		
<b>Practical Consumption</b>	Approx. 0.77 kg/m <sup>2</sup> @300 microns DFT		
<b>Typical Dry Film Thickness</b>	200-300 microns <small>*For use as exterior coating on high-temperature equipment</small>		
<b>@Temperature</b>	<b>20°C</b>	<b>30°C</b>	<b>40°C</b>
<b>Pot Life</b>	60 min	45 min	30 min
<b>Tack Free / Drying Time</b>	3 hrs	-	-

**Note 1:** The practical consumption and DFT are subject to specific project conditions and will adjust accordingly to ensure optimal results. Please consult HEGSEL!

**Note 2:** All the provided values are approximate and should be used as guidelines for specifications.

**Technical Data:**

Title	Standard	Value
<b>Density (Mix)</b>	-	1.5 g/cm <sup>3</sup>
<b>Solids Content (By Weight)</b>	-	100%
<b>Mixed Viscosity</b>	20°C	15,000 cPoise
<b>Salt Spray Test (Tested on heat aged samples)</b>	ASTM B117	1000 hours no damage
<b>Adhesion Strength</b>	ASTM D4541	8.3 MPa (cohesive failure)
<b>Temperature Cycling</b>	Ambient to 500°C	5 cycles no damage
<b>Continuous Temperature Resistance</b>	-	550°C
<b>Intermittent Temperature Resistance</b>	-	600°C

**Packaging:**

5 and 10 kg kits

**Storage:**

12 months in sealed original tins under dry and cool conditions at temperatures 5 - 30°C.  
Protect from heat and freeze!

## 1. Surface Preparation

To obtain the best results commence by grit blasting the surface to strip off the previous coating, followed by high-pressure water jet cleaning to cleanse any surface chemical contaminants and soluble salts.

Let the substrate dry and then re-blast the surface with angular grit to achieve at least Sa 2.5 cleanliness with a maximum 60 microns profile. Clear away any remaining dust and grit. In cases where the surface has been immersed in salt water it requires grit blasting, a 24-hour rest period, and then a fresh water rinse before undergoing another blast. New surfaces should be Meticulously degreased prior to the final grit blast. Immediate coating of the prepared surface is crucial to prevent oxidation and contamination.

## 2. Mixing

To ensure optimal performance of the product, thorough mixing is essential. Make sure both base and hardener components are kept below 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. Stir the BASE until it becomes smooth and all settled particles are evenly distributed again. Slowly add the Hardener to the base, ensuring it is completely integrated. After adding all the Hardener, continue mixing for an additional 3 minutes. Use a sturdy spatula or palette knife to scrape the container's interior walls during this process. This method ensures comprehensive blending of all materials.

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 20°C as well as the temperature of air is 3°C above the dew point in addition to ensuring the relative humidity being in the range under 80%. In

case the substrate's temperature falls below 20°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 Tools

**Brush Grade:** Application of the mixture can be performed using roller or soft natural bristle brush, with a width of approx. 7.5 cm and bristles not exceeding 5 cm in length. If you are using a new brush, ensure to condition it by forcefully bending and yanking the bristles to eliminate any loose ones. This step is significant to avert the coating from being contaminated by bristles while the application is taking place.

### **Spray Grade:**

Utilize a single-component airless spray unit with a 65:1 ratio, equipped with a 29 thou reversible fluid tip that provides a 65° spray fan angle. Remove all internal filters from pump and spray gun. The output fluid pressure at the spray tip should be no less than 4000 psi.

## 5. Application

A total DFT of around 200 - 300 should be achieved, not exceeding 300 microns. Regularly measure the wet film thickness with a wet film thickness gauge. After application, clean the brush or spray equipment using xylene or MEK-based thinners.

## 6. Quality Control

24 hours after application, inspect the integrity of the coating applied with a wire brush high voltage spark tester set at 800-1000 V. An alternative approach involves utilizing a wire brush high voltage spark tester set at 800-1000 V. 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. Subject the defect to spot grit blasting until the bare metal surfaces with at least SA 2.5 cleanliness and a maximum profile of 60 microns is achieved. Also, it is imperative to sweep blast 5 cm of the surrounding sound coating to create a rough surface as repair overlap. Prior to applying the repair of **HEGGEL Corr 230** clean the blasted area with xylene. Brush firmly into the surface profile to ensure complete wet out and then build to required thickness in a single coat. Apply the repair mix firmly into the surface profile with the brush to guarantee complete wet out, subsequently building to the needed thickness in a single layer.

## 8. Curing Time Schedule

After approximately 180 minutes the applied coating would be touch dry at 20°C. A minimum curing period of 5 days at 20 °C should be provided before exposing to a chemical load.

## 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.

**HEGGEL Corr 230**; Revision No: 2.10 / Last Revision Date: 20.09.2023

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.

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