Corro-Zinc 97

PRODUCT DESCRIPTION

This zinc rich powder coating is designed as a primer coat on phosphated and blast-cleaned steel objects and structures. It combines high level of corrosion resistance with advanced mechanical and degassing properties and excellent inter-coat. This powder enables efficient application, good edge coverage and provides a uniform flow. For optimal corrosion protection and attractive surface appearance this product should be used in combination with suitable polyester coating. Recommended top-coat products include Jotun Facade/Corro-Coat PE-F and Corro-Coat PE ranges from Jotun.

Application areas

Typical areas of application are steel building structures, agricultur machinery, steel fences, outdoor public area and steel components present in marine environments.

POWDER PROPERTIES

Property	Standard	Result
Specific gravity		3.1 ± 0.1 kg/dm^3

Storage

Keep in a dry cool area. Maximum temperature 25 °C. Maximum relative humidity 60 %. Under these mentioned conditions, product shelf life is 12 months from date of manufacture.

APPLICATION

Pretreatment

The overall quality of the coating system is largely dependent on the type and quality of the pre-treatment and the top coat. The recommended types of pre-treatment depend on the need for corrosion resistance:

Medium resistance (Corrosion Class C3*):
Iron phosphate or blast cleaning (SA 2½ with a profile of 40-80 µm).

High resistance (Corrosion Class C4*):
Zinc phosphate or blast cleaning (SA 2½ with a profile of 40-80 µm), alternatively in combination with iron phosphate (C4 high*).

Very high resistance (Corrosion Class C5 – M/I*):
Blast cleaning (SA 2½ with a profile of 40-80 µm) in combination with zinc phosphate. (C5-M high, C5-I high*).

* Reference to ISO 12944-2 (classification of environments).

Powder application

Curing schedule	Object temperature	Time
Full cure	180 °C 200 °C	10 minutes 6 minutes
Partial cure	180 °C 200 °C	3-5 minutes* 2-3 minutes*

*Top coat is then applied and cured according to its specifications.

The system is cured using either full or partial cure regimes for Primax Protect.

Partial cure of the primer is recommended to enhance inter-coat adhesion between primer and top coat following the above partial cure schedule for the primer. Top coat is then applied and the system should be cured according to top coat or primer's specification, whichever is the most stringent.

The application of a topcoat must take place no later than 12 hours after the application of this product. The shortest possible interval is recommended. Top coat should be cured according to regime identified in its Technical Data Sheet.

The inter-coat adhesion properties and the complete system cure must always be verified.

Equipment

Suitable for Corona or Tribo charging equipment.

APPEARANCE

Colour	Medium grey shade	
Gloss	EN ISO 2813 (60°)	60±10

If the significant surface is too small or unsuitable for the gloss to be measured with the glossmeter, the gloss should be compared visually with the reference sample (from the same viewing angle).

PERFORMANCE

The technical data provided below are typical for this product when applied as follows:

Substrate	zinc-phosphated steel panels
Substrate thickness (mm)	0,8
Film thickness (µm)	60-80

Typical values when tested.

Property	Standard	Result
Adhesion	EN ISO 2409 (2 mm)	Cross-cut rating Gt0 (100 % adhesion)
Impact resistance	ASTM D2794 (5/8 '' ball)	> 60 inch-pounds without film cracking
Cupping test	EN ISO 1520	Passes 5 mm without film cracking
Test 1*	**Standard**	**Result**
Cross-cut test	EN ISO 2409 (2 mm)	Cross-cut rating Gt0 (100 % adhesion)
Salt spray resistance	ISO 7253	After 1440 hours - maximum 1 mm undercutting.
Water condensation resistance	ISO 6270	After 1440 hours - no blistering, cracking or flaking.
Test 2*	**Standard**	**Result**
Salt spray resistance	ISO 7253	After 1440 hours - cross cut Gt0, 1mm undercutting, no blistering, cracking or flaking.
Water condensation resistance	ISO 6270	After 720 hours - cross cut Gt0, no blistering, cracking or flaking.
Humid atmosphere containing sulphur dioxide	ISO 3231	After 30 cycles - cross cut Gt0, less than 0. 5mm undercutting, no blistering, cracking or flaking.

Test 3*	Standard	Result
Cyclic corrosion test	ISO 11997-1	After 2000 hours - 2.4 mm undercutting.

** Test results for combinations of Corro-Zinc 97 with Jotun Facade/Corro-Coat PE-F (smooth glossy) as top coat.*
Note: test results are provided as a performance indication and do not constitute specifications.

Test 1: Tested on 0.8 mm zinc-phosphated steel panel and 3.0 mm grit-blasted and zinc-phosphated steel panel, respectively. Total film thickness 160 µm (80 µm primer + 80 µm top coat).

Test 2: Tested on grit-blasted (Sa 2½) SS 52 steel panels. Total film thickness 200 µm (100 µm primer + 100 µm top coat).

Test 3: Tested on 0.8 mm iron-phosphated steel panel. Total film thickness 155 µm (75 µm primer + 80 µm top coat).

Third party tests performed by the Institute für Korrosionsschutz Dresden GmbH, concluded that a system of Corro-Zinc 97 and Jotun Facade "qualified as 'high' for corrosivity categories C5-I, C5-M and C4 according to DIN EN ISO 12944 part 6 (Laboratory performance test methods)."

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.