

Primax Protect

PRODUCT DESCRIPTION

This zinc rich powder coating is designed as a primer coat on blast-cleaned, phosphated and galvanized steel objects and structures. It combines a high level of corrosion resistance with advanced mechanical and degassing properties, excellent adhesion to substrate and inter-coat adhesion.

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 topcoat products include Jotun Facade, Corro-Coat PE and Tradex from Jotun.

Application areas

Typical areas of application include building structures, agricultural machinery, steel fences, outdoor public areas and steel components present in coastal 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 surface preparation, pretreatment, and the topcoat. Recommended type of surface preparation is grit blasting which must be performed according to specification provided in Jotun's "Application Guide of Powder Coatings on Steel". Grit blasted surfaces are suitable to provide a moderate level of protection. For galvanized steel sweep blasting is recommended.

Chemical pretreatment

Available methods of pretreatment include zinc and iron phosphating and chromating of galvanized steel. Recommended types of pretreatment depend on specific design requirements and on the need for corrosion resistance which is specified in the Performance section of the document.

Powder application

Partial cure of the primer is recommended to enhance inter-coat adhesion between primer and a topcoat following the below schedule.

Curing schedule	Object temperature	Time
Partial cure	180 °C	3-5 minutes*
	200 °C	2-3 minutes*
Full cure	180 °C	8-10 minutes
	200 °C	4-6 minutes

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

* The system is then fully cured following the primer or topcoat specifications; whichever is most stringent.

Equipment

This product is suitable for Corona and is not recommended for Tribo charging equipment.

APPEARANCE

Colour	Medium grey shade	
Gloss	EN ISO 2813 (60°)	55±15

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

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
Water condensation resistance	ISO 6270-2	480 hours** 720 hours***
Salt spray resistance	ISO 9227 NSS	720 hours** 1440 hours***
Sulfur dioxide corrosion testing in an alternating atmosphere with 0,2 I SO2	ISO 3231	720 hours***

* Typical for this product when applied on zinc-phosphated steel panels (0.8 mm) with coating film thickness 60-80 µm using full cure schedule.

** System 1: Grit blasted (Sa 2½) steel panels, Primax Protect +Jotun Façade 2487. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

** System 2: Grit blasted (Sa 2½) iron phosphated steel panels, Primax Protect +Jotun Façade 2487. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

*** System 3: Grit blasted (Sa 2½) zinc phosphated steel panels, Primax Protect +Jotun Façade 2487. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

*** System 4: Grit blasted (Sa 2½), hot dip galvanized steel with sweeping, Primax Protect +Jotun Façade 2487. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

*** System 5: Grit blasted (Sa 2½), hot dip galvanized steel with chromate conversion layer, Primax Protect + Jotun Façade 2487. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

Primax Protect and Jotun's topcoats in combination with various methods of surface pretreatment provide the below levels of corrosion protection as per ISO 12944. For more details refer to Jotun's Steel Performance Matrix.

Grit Blasting Sa 2.5	Pretreatment	C3			C4			C5-M&I		
		low	medium	high	low	medium	high	low	medium	high
		<5 years	5-15 years	>15 years	<5 years	5-15 years	>15 years	<5 years	5-15 years	>15 years
X	–									
X	Iron Phosphate									
X	Zinc Phosphate									
X	Galvanized Steel + Sweeping									
X	Galvanized Steel + Chromating									

Tested by IFO: Institute for Surface technology, Germany 2014

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.