

Primax Protect

PRODUCT DESCRIPTION

This powder coating product is advanced zinc-rich offering to meet stringent service requirements for blast-cleaned, phosphated and galvanized steel objects and structures. This product is designed to provide advantage of excellent corrosion protection and inter-coat adhesion properties.

For the combined benefit of corrosion protection with UV exposure and attractive finish, this product can be top coated with suitable exterior durable product offerings from Jotun. The exterior durable product offering from Jotun includes Jotun Facade, Jotun Super Durable, Reveal Era and many more.

The combined coating system of Primax Protect and Jotun Super Durable is tested at third-party test laboratory for corrosion protection for up to CX corrosivity category as per ISO-12944-9.

Application areas

Objects that require enhanced corrosion protection, such as:
Building structures
Agricultural machinery
Electrical enclosures and panels
Steel fences
Equipments exposed to coastal environments

POWDER PROPERTIES

Property	Standard	Result
Specific gravity	Calculated	3.1 ± 0.1 g/cm ³

Storage

Keep in a dry cool area. Maximum temperature 25 °C. Maximum relative humidity 60 %. If stored longer than 12 months a quality test must be performed.

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 Jotun Powder Coatings' products on Steel". Grit blasted surfaces are suitable to provide a moderate level of protection. For higher demand, it is recommended to use suitable mechanical and/or chemical surface treatment (e.g. blasting, phosphating). Detailed advice should be sought from the pre-treatment supplier.

For hot dipped galvanized steel, sweep blasting is recommended. Please refer to Jotun's "Application Guide for Jotun Powder Coatings' products on Hot Dipped Galvanized Steel".

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

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. When directly fired gas ovens are used, sample of complete system needs to be tested to ensure inter-coat adhesion between the primer and a top coat. For the same reason it is also recommended not to exceed 200 °C oven temperature.

The most suitable partial cure time of the Primax Protect at temperature selected from the given range is recommended to be defined by a practical experiment. That will help to secure the best decorative and functional performance, considering differences in coated objects and curing ovens.

* Top coat is then applied and the system should be fully cured in accordance with the recommended curing schedules of either the selected Jotun topcoat or the primer; whichever is more stringent.

Recommended film thickness (µm): >80

Equipment

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

APPEARANCE

Colour	Medium grey, black	
Gloss	EN ISO 2813 (60°)	65±20
Finish	Smooth	

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	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
Resistance to water condensation	ISO 6270-1 ISO 4628-2 ISO 4628-3 ISO 4628-4 ISO 4628-5	Passes or exceeds C4H requirements of ISO 12944-6 ** Passes or exceeds C5VH requirement of ISO 12944-6*** ***
Resistance to neutral salt spray	ISO 9227 ISO 4628-2 ISO 4628-3 ISO 4628-4 ISO 4628-5	Passes or exceeds C4H requirements of ISO 12944-6 ** Passes or exceeds C5VH requirement of ISO 12944-6*** ***

Pull off test	ISO 4624	Passes or exceeds the 2.5 MPa requirement of ISO 12944-6** Passes or exceeds the 2.5 MPa requirement of ISO 12944-6***
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* 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 Facade. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

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

*** System 3: Hot dipped galvanized (ISO 1461) steel with sweep blasting, Primax Protect + Jotun Facade. Total film thickness ~160 µm (primer 80 µm and 60-80 µm topcoat).

For more information on performance using Primax primers and Jotun's various exterior durable topcoats in combination with various methods of surface preparation and various types of substrates can be found on Jotun Primax Performance Matrix brochure.

Additional information:

This product when used in combination of Jotun Facade or Jotun Super Durable, maybe backed by a Product Performance Guarantee when applied to a grit blasted carbon steel substrate. For further advice, please contact your local Jotun office.

Sustainability

Powder coating is applied in air-and-powder mix in a strictly controlled factory process using electrostatic gun and a high temperature curing oven to create film. Virtually no VOCs are released in the process compared to traditional liquid paints. Unused or oversprayed powder can be recycled with minimal wastage, and disposal is easy and safe. In addition, all Jotun Powder Coatings' products do not contain intentionally added lead.

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.