

Product Data Sheet

AkzoNobel Powder Coatings

Interpon BPP330 AL113D Barrier Primer

Product Description

Interpon BPP 330 is a barrier protective powder primer that is designed to give enhanced corrosion protection of mild steel and hot dip galvanized steel. Interpon BPP 330 is a pure epoxy primer showing a high cross-linking degree and reinforced with barrier effect agents to provide the best barrier protection. Interpon BPP 330 must be over-coated with a powder or a PU liquid topcoat. Interpon BPP330 could be used as holding primer with a maximum waiting delay of 1 week.

Powder Properties

Chemical type	Thermosetting epoxy
Particle Size	Suitable for electrostatic spray
Specific gravity	1.43-1.49 g/cm ³
Storage	Dry cool conditions below 25°C (open boxes must be resealed)
Shelf life	12 months
Stoving schedule (object temperature)	See Curing Section below
Aspect	Grey, Smooth
Gloss	65-75 units

Test Conditions

The results shown below are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only. Actual product performance will depend upon the circumstances under which the product is used.

Substrate	Steel
Pretreatment	Iron Phosphate
Film Thickness	60 – 80 microns
Stoving Schedule (AL113D)	10 minutes at 160°C (object temperature)
Stoving Schedule (With topcoat)	10 minutes at 180°C (system) (Topcoat - Interpon D1036 Ral 9010 60-80 microns)

Mechanical Tests

Flexibility	ISO 1519 (Cylindrical Mandrel)	Pass 5 mm (AL113D mono-coat) Pass 5 mm (System)
Adhesion	BS EN ISO 2409 (2mm Crosshatch)	Gt0 (AL113D mono-coat) Gt0 (System)
Erichsen Cupping	ISO 1520	Pass 8 mm (AL113D mono-coat) Pass 6 mm (System)
Impact	ISO 6272 (1993)	Pass 0.5 kg.m (AL113D mono-coat) Pass 0.5 kg.m (System)

Corrosion Tests on Mild Steel

The results shown are based on tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for advice only, actual performance depends upon the circumstances under which the product is used.

Neutral Salt Spray Cycle 3 C	ISO 9227 Renault D17 1686	Results Detailed in Table 1 of Appendix Results Detailed in Table 2 of Appendix
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Corrosion Tests on Hot Dip Galvanised Steel

The results shown are based on tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for advice only, actual performance depends upon the circumstances under which the product is used.

Substrate	Hot Dip Galvanised Steel	
Pre-Treatment	Sweep blasting	
Primer Thickness	60 – 100 microns	
Stoving Schedule (AL113D)	10 minutes at 160°C	
Powder Topcoat	Interpon D1036 Ral 6005	
Topcoat Thickness	60 -80 microns	
Stoving Schedule (System)	10 minutes at 200°C	
Neutral Salt Spray	ISO 9227	After 720h of Salt Spray exposure, the adhesion (following ISO 2409) is Class 0 Class 1 on the surface

Pre-treatment

For maximum protection it is essential to ensure that Interpon BPP330 AL113D is applied to clean, dry oxide-free surfaces. It is therefore, necessary to carry out mechanical and/or chemical pre-treatment prior to application of AL113D which should then be over-coated with the recommended Interpon topcoat. Surface preparation depends upon the metal, the type of surface, its condition and the required performance. For good protection against corrosion the following is recommended:

Mild Steel

- Grit blasting to at least SA 2.5 in accordance with ISO 8501.1, 1998 (F), roughness equivalent to B9a, B10b, or B10a (Rz 35 – 65 μ m; Ra 6 – 10 μ m) using Rutogest n°3 LCA-CEA, in accordance with NFE 05051 (1981) and/or
- Degreasing & Phosphating followed by passivation, DI water rinsing and drying.

Galvanised Steel

- Sweeping with a maximum zinc layer thickness reduction of 5 to 10 μ depending on the initial zinc thickness or
- Degreasing & Chromating or Zn/Zn-Ni Phosphating.

A degassing operation before coating reduces the bubbling phenomenon

Application

AL113D is suitable for corona electrostatic spray and for tribo depending on the tribo equipment

Recommended film thickness	60-100 μ m. Good protection is linked with the recommended film thickness
Recycling	Unused powder can be reclaimed using suitable equipment and recycled through the coating system, but a minimum of 70% new powder should be used.

**Interpon BPP330
AL113D
Barrier Primer**

Curing

AL113D must be cured following the conditions below. These condition vary depending on if it is immediately over-coated or used as a holding primer. The conditions depend also on the topcoat type: liquid or powder.

AL113D over-coated immediately

System		Interpon BPP330 + Powder topcoat		Interpon BPP330 + Liquid PU topcoat	
Primer to bake		Interpon BPP		Interpon BPP	
Object minimum temp.		130°C		160°C	
Object maximum temp.		180°C		180°C	
Maximum oven temp.		No peak above 190°C		No peak above 190°C	
Stoving Schedule	Object temp.	Min	Max	Min	Max
	130°C	15 min (green cure)	60 min (green cure)	Not applicable	Not applicable
	160°C	10 min	40 min	20 min	40 min
	170°C	6 min	35 min	10 min	35 min
	180°C	2 min	30 min (maximum)	6 min	30 min (maximum)

When the primer I to be immediately over-coated with a powder topcoat we recommend the green cure conditions in order to achieve the best adhesion intercoat adhesion.

AL113D used as holding primer

System		Interpon BPP330 + Powder topcoat		Interpon BPP330 + Liquid PU topcoat	
Primer to bake		Interpon BPP		Interpon BPP	
Object minimum temp.		160°C		160°C	
Object maximum temp.		180°C		180°C	
maximum oven temp.		No peak above 190°C		No peak above 190°C	
Stoving Schedule	Object temp.	Min	Max	Min	Max
	160°C	10 min	40 min	20 min	40 min
	170°C	6 min	35 min	10 min	35 min
	180°C	2 min	30 min (maximum)	6 min	30 min (maximum)

The primer should be cured in a convection oven, Infra-red emitters may also be used, but in either case air temperature must not exceed 190°C.

Note: Failure to comply with the recommended curing conditions may affect the adhesion of the topcoat and cause degradation of the coating system properties. Parts coated with AL113D should be handled carefully avoiding any surface contamination.

**Top Coat
Application**

Interpon BPP330, AL113D, should ideally be over-coated within 24 hours of application. However, the over-coating time can be extended to 1 week after application, preliminary cleaning before application of the topcoat may be required in this case. To ensure good intercoat-adhesion, and optimum performance, of the complete Interpon BPP330 powder system, the whole system must be cured in accordance with the recommended curing conditions of the powder topcoat.

When used as a holding primer, the primer must be cleaned before application of the topcoat. This can be achieved by removal of dust by blowing with clean dry air and/or brush with a soft brush.

Interpon BPP330 AL113D Barrier Primer

For over-coating with a liquid PU topcoat Interpon BPP330 must first undergo a slight dry sanding with 800 grade sandpaper.

Damage Repair

Any damage to the Interpon BPP330 coating system must be repaired as soon as possible.

Surface preparation	Damaged areas must be clean and free of grease or rust. Dry-sand the area with 600 grade paper down to the substrate. The area must be completely free of dust and cleaned with a non-aggressive solvent before proceeding.
Application	For repairs a PU (2K or 1K) liquid paint is recommended

Safety Precautions

Please consult the Material Safety Datasheet (MSDS)

Disclaimer

IMPORTANT NOTE: The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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