

Product Datasheet



BU Powder Coatings Interpon BPP 330

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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 BPP 330** 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	<i>Please see section on curing conditions</i>
Shelf life	12 months
Stoving schedule	To match user's requirements
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 (BPP alone)	10 minutes at 160°C (object temperature) 30 minutes at 180°C (Maximum curing conditions)
Stoving Schedule (With topcoat)	10 minutes at 180°C (system) <i>(Topcoat - Interpon D1036 Ral 9010 60-80 microns)</i>

Mechanical Tests

Flexibility	ISO 1519 (Cylindrical Mandrel)	Pass 5 mm (BPP mono-coat) Pass 5 mm (System)
Adhesion	BS EN ISO 2409 (2mm Crosshatch)	Gt0 (BPP mono-coat) Gt0 (System)
Erichsen Cupping	ISO 1520	Pass 8 mm (BPP mono-coat) Pass 6 mm (System)
Impact	ISO 6272 (1993)	Pass 0.5 kg.m (BPP 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	ISO 9227	Results Detailed in Table 1 of Appendix
Cycle 3 C	Renault D17 1686	Results Detailed in Table 2 of Appendix

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	Sweeping	
Primer Thickness	60 – 100 microns	
Stoving Schedule (Primer)	10 minutes at 160°C	
Powder Topcoat	Interpon D1036 Ral 6005	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

Pretreatment

For maximum protection it is essential to pretreat components prior to the application of **Interpon BPP 330** is applied to clean, dry oxide-free surfaces, followed by 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 – 65µm; Ra 6 – 10 µm) using Rutogest n°3 LCA-CEA, in accordance with NFE 05051 (1981) and/or
- Degreasing & Phosphating followed by passivation, DW 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

Interpon BPP 330 is suitable for corona electrostatic spray and for tribo depending on the tribo equipment

Recommended film thickness 60-100 µm. 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.

Curing

BPP330 must be cured following the below conditions, depending if it is immediately overcoated or used as a holding primer. The conditions depend also on the topcoat type: liquid or powder.

Interpon BPP 330 overcoated 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.	Mini	Maxi	Mini	Maxi
	130°C	15 min (green cure)	60 min (green cure)	<i>Not applicable</i>	<i>Not applicable</i>
	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)

BPP330 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.	Mini	Maxi	Mini	Maxi
	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)

For an immediate covering of the primer with the powder topcoat and to provide the best adhesion between them we recommend to prefer the green cure conditions of the primer.

The primer should be cured in a convection oven, optionally with/ or infra-red heaters, with air temperature not exceeding 190°C.

Note: Failure to comply with the recommended curing conditions may affect the adhesion of the topcoat and cause degradation of the coating properties of the system. Parts coated with **Interpon BPP 330** should be handled carefully avoiding any surface contamination.

Topcoat Application

Interpon BPP 330 should ideally be overcoated within 24 hours of application. However the overcoating could be done until 1 week after application and if needed with a preliminary cleaning. To ensure the cohesion of the

Interpon BPP 330 powder system, as well as optimum performance, the whole system must be cured in accordance with the recommended curing conditions of the powder topcoat.

For a use as a holding primer before overcoating the primer should be cleaned. Remove dust by blowing with clean dry air and/or brush with a soft brush.

For overcoating with a liquid PU topcoat Interpon BPP330 must first undergo a slight dry sanding with a 800 sandpaper.

Damage Repair	Any damage to the Interpon BPP 330 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)

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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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Table 1 – Neutral Salt Spray test

Coating system		Interpon BPP 330 + Interpon D1036			
Conditions	Substrate	Steel 2mm			
	Pretreatment	Grit blasting SA 2.5 - Ra 6-10µm			
	Interpon BPP 330 thickness	60 - 70 µm			
	Interpon D1036 Ral 9010 thickness	70 - 80 µm			
	Adhesion on surface before test	Class 0			
Neutral Salt Spray ISO 9227	Time	Quotation	Corrosion	Blistering	Adhesion
	1000 hours	Scribe	XX	Size 4 Degree 1	Loss 1,5 mm
		Surface	Ri 0	None	Class 0
	1522 hours	Scribe	XX	Size 4 Degree 3	Loss 2 mm
		Surface	Ri 0	None	Class 0

Please refer to the quotations page 4

Table 2 – Cycle 3C

Coating system		Interpon BPP 330 + Interpon D1036			
Conditions	Substrate	Steel 2mm			
	Pretreatment	Grit blasting SA 2.5 - Ra 6-10µm			
	Interpon BPP 330 thickness	70 - 80 µm			
	Interpon D1036 Ral 7022 thickness	80 - 90 µm			
	Adhesion on surface before test	Class 0			
3C Cycle Renault method ME D17 1686 One cycle description: - 24h salt spray - 4x24h (8h humid chamber 40°C-98%RH ; 16h normal chamber 20°C-73%RH) - 48h drying chamber 20°C-63%RH	Cycles number	Quotation	Corrosion	Blistering	Adhesion
	3 cycles	Scribe	X	Size : 4 Degree 4	Loss 2 mm
		Surface	Ri 0	None	Class 0
	6 cycles	Scribe	X	Size 4 Degree 4	Loss 4 mm
		Surface	Ri 0	None	Class 0
	9 cycles	Scribe	X/XX	Size 5 Degree 5	Loss 5 mm
		Surface	Ri 0	None	Class 0

Please refer to the quotations page 4

Results quotation of accelerated ageing tests

	Adhesion	Rust	Blistering
At Scribe	Loss of adhesion from edge of scribe, in mm (by peeling using a scalpel)	0 None X Slight XX Moderate XXX Severe	Degree of blistering in accordance with ISO 4628 0 : None 1 : Some defects 2 : Small 3 : Medium 4 : Important 5 : Very important
On general Surface	In accordance with ISO 2409 Class 0 : no peeling to Class 5 : total peeling	In accordance with ISO 4628 Ri0 : 0% Ri1 : 0,05% Ri2 : 0,5% Ri3 : 1% Ri4 : 8% Ri5 : 40 to 50%	Blisters size in accordance with ISO 4628 0 : None (invisible at 10x magnification) 1 : Just visible (10x magnification) 2 : Just visible (normal vision) 3 : Clearly visible ($\leq 0,5$ mm) 4 : 0,5 to 5 mm 5 : > 5 mm