Product Data Sheet

AkzoNobel Powder Coatings

Interpon RDX Plus
AL180CS

Product Description

Interpon RDX Plus is a powder primer protective barrier designed to give enhanced corrosion protection of mild steel, hot dip galvanized steel and Zinc sprayed (gas flame/electrical deposition) and Aluminium.

Interpon RDX Plus is a pure epoxy primer showing a high cross-linking degree reinforced with barrier effect agents to provide the best barrier protection. Interpon RDX Plus must be over-coated with an Interpon powder or a PU liquid topcoat. Interpon RDX Plus could be used as holding primer with a maximum waiting delay of 1 week.

Powder Properties

Chemical type	Thermosetting epoxy
Appearance	Smooth
Gloss level (60°)	80-90%
Color	Grey
Recommended Film Thickness (µm)	60 - 100 µm
Density (g/cm³)	1,60 - 1,65 g/cm³
Application	Electrostatic
Storage	Under dry, cool (≤ 25°C) conditions
Shelf life	At least 12 months from production date
Curing schedule	See section curing bellow

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/ Pretreatment	Steel; Silane
Primer Thickness	60-80 microns
Primer Curing	10 minutes at 160°C (Object Temperature)
Topcoat	Interpon 600 / D1010
Topcoat thickness	60-80 microns
Topcoat Curing	10 minutes at 200°C (Object Temperature)

Mechanical Tests

Bending test (Cylindrical Mandrel)	ISO 1519	Pass 5mm (Primer)
Adhesion	ISO 2409 (2mm crosshatch)	Class 0 (Primer) Class 0 (System)
Cupping	ISO 1520	Pass 6 mm (Primer)
Direct Impact	GB 1732-93	Pass 50 kg.cm (Primer) Pass 30 kg.cm (System)

Corrosion Tests
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 are detailed in Table 1 of Appendix

Pretreatment

Surface preparation depends upon the metal, the type of surface, its conditions and the required performance.

Substrate	Mechanical pretreatment	Chemical pretreatment
Mild steel	Grit/Shot Blasting Cleanness: Sa≥2.5 (ISO 8501-1) Roughness: Rz 40-80 µm / Ra 6-12 µm	phosphate or silane or nano-ceramic pre-treatment
Cast steel		
Electro Zinc steel	Sweeping with a maximum zinc layer thickness reduction of 5 to 10 µm depending on the initial zinc thickness	
Hot dip galvanized steel		
Aluminium	Sweeping	Follow QUALICOAT (16th edition) recommendations for pre-treatment methods.
Zinc sprayed (gas flame/electrical deposition)	Grit/Shot Blasting Cleanness: Sa≥2.5 (ISO 8501-1) Roughness: Rz 40-80 µm / Ra 6-12 µm	Not recommended

Application

Interpon RDX Active can be applied by manual or automatic electrostatic spray equipment. Interpon RDX Active can also be formulated for tribo application.

Recommended film thickness	60-100 µm
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

Interpon RDX Plus shows a wide curing range must allowing application on substrates of different nature and thicknesses.

	Green curing		Full semi-curing	
Object temperature	Min	Max	Min	Max
130°C	15’	30’		
160°C			10’	14’
170°C			6’	10’
180°C			2’	4’

Interpon RDX Plus should be cured in a convection oven, optionally with infra-red heaters.

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

For use as anti-gassing primer, a full semi-curing must be required. The curing temperature should not be higher than 180°C.

Topcoat Application	Interpon RDX Plus should ideally be over coated within 24 hours of application. However, as HOLDING PRIMER (be careful with Full semi-curing), the overcoating could be done until 1 week. A preliminary cleaning is strongly recommended before application of the topcoat. To ensure the optimum performance of the Interpon RDX Plus powder system, the whole system must be cured in accordance with the recommended curing conditions of the powder topcoat. 1) **Powder**: For a use as holding primer (with a full semi-curing conditions required), before overcoating, the Interpon RDX Plus primer shall be cleaned. Remove dust by blowing with clean dry air and/or brush with a soft brush. 2) **Liquid:** For overcoating with a liquid PU topcoat, the Interpon RDX Plus must first undergo a slight dry sanding with a 600 sandpaper. The product has to be fully cured according to the liquid PU topcoat stoving recommendations.
Damage repair	Any damage of the Interpon RDX Plus 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	This product is intended for use only by professional applicators in industrial environments and should not be used without reference to the relevant health and safety data sheet which Akzo Nobel has provided to its customers.
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 fulfil 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. Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel.

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Appendix 1: Neutral Salt Spray Test

Coating System			**Interpon RDX Plus + Interpon 600/D1010**		
Conditions	Substrate		Steel 0.6mm		
	Pretreatment		Silane		
	Primer thickness		70 - 90 µm		
	Topcoat thickness		60 - 80 µm		
	Adhesion on surface before test		Class 0		
Neutral Salt Spray ISO 9227	**Time**	**Quotation**	**Corrosion**	**Blistering**	**Adhesion**
	720 hours	Scribe	X	Size 1 Degree 1	Average loss 0.4 mm
		Surface	Ri 0	None	Class 0
	1000 hours	Scribe	X	Size 2 Degree 1	Average loss 0.9 mm
		Surface	Ri 0	None	Class 0
	1500 hours	Scribe	XX	Size 2 Degree 2	Average loss 1.6 mm
		Surface	Ri 0	None	Class 0

Key for results quoted in tables 1

	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 (≤0.5mm) 4: 0.5 to 5 mm 5: > 5 mm