Product Data Sheet

AkzoNobel Powder Coatings

Interpon Redox Active
EL555K

Product Description	**Interpon Redox Active** is a powder coating primer, totally free from Zinc. It is designed to give enhanced corrosion protection of mild steel and is an epoxy-polyester primer including active anticorrosive pigments. The addition of these pigments provides a steel passivation effect to protect the substrate enhancing the performance when compared to other non-active systems. Interpon Redox Active must be over-coated with an Interpon powder or a Cromadex PU liquid topcoat. Interpon Redox Active could be used as holding primer with a maximum waiting delay of 6 weeks.		
Powder Properties	**Chemical type**	Thermosetting epoxy-polyester	
	Appearance	Smooth	
	Gloss level (60°)	60 ± 5 units	
	Color	Grey	
	Recommended Film Thickness (µm)	60 - 80 µm	
	Density (g/cm³)	1,65 - 1,70 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	Steel 0,8 mm	
	Pretreatment	Zinc phosphate with passivation	
	Primer Thickness	60-80 microns	
	Curing Schedule (with topcoat)	10 minutes at 180°C (Object Temperature) as primer for complete system - “Green- Cure” Topcoat: Interpon D1010 / D2015 Ral 9010 60-80 microns	
Mechanical Tests	**Pencil hardness**	ASTM D 3363	Mitsubishi H, No scratch
	Adhesion	ASTM D3359-97 (2mm crosshatch)	Class 0 (Primer) Class 0 (System)
	Erichsen Cupping	ASTM 643-84	Pass 5 mm (Primer) Pass 4 mm (System)
	Flexibility (Conical Mandrel)	ASTM D522-93A	Pass 3 mm (Primer) Pass 10 mm (System)
	Impact	ASTM D2794	Pass 0.4 kg·m (Primer) Pass 0.3 kg·m (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	ASTM B117	<2mm corrosion creep from scribe after 1500 hrs exposure in SST Cabinet

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 Blasting Sa 2.5 in accordance with ISO NF EN 8501-1. Roughness: Rz 42-84 µm / Ra 6-12 µm	Degreasing & phosphating (or equivalent) followed by passivation, DW rinsing and drying.
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		Degreasing & phosphating / chromating followed by passivation.
Zinc sprayed (gas flame/electrical deposition)	Grit Blasting Sa 3 in accordance with ISO NF EN 8501-1. Roughness: Rz 42-84 µm / Ra 6-12 µm	Banned

Application

Interpon Redox Active is suitable for corona electrostatic spraying.

Recommended film thickness	60-80 µm A good protection is linked with the recommended film thickness. For marine applications, related to cycles approved RINA / DM, the thickness of the metal support must be> = 0.6mm, and the thickness of the coating film must respect the value of 80µ ± 10%.
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 Redox Active shows a wide curing range must allowing application on substrates of different nature and thicknesses.

	Curing			
	Green curing		Full curing	
Object temperature	Min	Max	Min	Max
130°C	10’	60’		
160°C			10’	20’
180°C			7’	14’
200°C			5’	10’

For best adhesion between the topcoat and primer we recommend green cure of primer followed by immediate powder topcoat application. The primer should be cured in a convection oven, optionally with infra-red heaters, with air temperature not exceeding 220˚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 Redox Active should be handled carefully avoiding any surface contamination.

Topcoat Application

Interpon Redox Active should ideally be over coated within 24 hours of application. However, as **HOLDING PRIMER (be careful with TOTAL curing),** the overcoating could be done until 6 weeks. A preliminary cleaning is strongly recommended before application of the top coat.

To ensure the cohesion of the Interpon Redox Active powder system, as well as optimum performance, 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 fully curing conditions required), before overcoating, the Interpon Redox Active 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 Redox Active must first undergo a slight dry sanding with a 800 sandpaper. The product must be fully cured according to the liquid PU topcoat stoving recommendations.

Damage repair

Any damage of the Interpon Redox Active 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, we recommend the following two-coat liquid paint system from International Protective Coatings & Cromadex.

1st Coat: two-pack acid etch primer
2nd Coat: two-pack polyurethane topcoat Interthane 990 or Cromadex 600

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.

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