

Product Data Sheet

AkzoNobel Powder Coatings

Interpon Redox Plus AL258F

Product Description

Interpon Redox 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 Redox Plus is a pure epoxy primer showing a high cross-linking degree reinforced with barrier effect agents to provide the best barrier protection. Interpon Redox Plus must be over-coated with an Interpon powder or a Cromadex PU liquid topcoat. Interpon Redox Plus could be used as holding primer with a maximum waiting delay of 3 weeks.

Key benefits: wide curing range, good mechanical properties, excellent edge coverage, good anti gassing properties, good over coating capacity.

Qualicoat:

P-0740 for Aluminium substrate

Qualisteelcoat:

PE-020 2 coat system, ST2, steel substrate, chemical pre-treatment – up to C4-H
 PE-021 2 coat system, ST2, steel substrate, mechanical pre-treatment – up to C4-H
 PE-139 3 coat system, STEC3, steel + electrophoretic primer – up to C5-H
 PE-033 2 coat system, MS2, Steel coated by thermal spraying, up to C5-H
 PE-121 2 coat system, SZ2, Continues galvanized steel, chemical pre-treatment, C4-H
 PE-031 2 coat system, HD2, hot dip galvanized steel, mechanical pre-treatment, C5-H
 PE-123 2 coat system, HD2, hot dip galvanized steel, chemical pre-treatment, up C5H
 PE-138, 3 coat system, SZ3, Continues galvanized steel, chemical pre-treatment, C5H

GSB International

901b for galvanized steel

Powder Properties

Chemical type	Thermosetting epoxy
Appearance	Smooth
Gloss level (60°)	5-15 units Aspect may vary depending on curing conditions (green cure)
Color	Grey (about RAL 7032)
Recommended Film Thickness (µm)	60 - 80 µm
Density (g/cm³)	1,60 - 1,65 g/cm ³
Application	Electrostatic
Storage	Under dry, cool ($\leq 25^{\circ}\text{C}$) 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	
	Pretreatment	Iron Phosphating	
	Primer Thickness	70-90 microns	
	Curing Schedule (with topcoat)	10 minutes at 200°C (Object Temperature) Topcoat: Interpon D1036 / D2525 Ral 9010 60-80 microns	
Mechanical Tests	Bending test (Cylindrical Mandrel)	ISO 1519	Pass 5mm (Primer) Pass 5mm (System)
	Adhesion	ISO 2409 (2mm crosshatch)	Class 0 (Primer) Class 0 (System)
	Erichsen Cupping	ISO 1520	Pass 6 mm (Primer) Pass 4 mm (System)
	Impact	ISO 6272	Pass 0.5 kg·m (Primer) Pass 0.5 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	ISO 9227	Results are detailed in Table 1 of Appendix
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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.	Degreasing by phosphating & passivation or primary wash using liquid primer Cromadex 903 (can be substituted by chemical passivation with Cromadex MC245).
Hot dip galvanized steel		
Aluminium	Sweeping	Follow QUALICOAT (16th edition) recommendations for pre-treatment methods.
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

For more details look on technical datasheets of Cromadex 903 and MC245.

Application

Interpon Redox Plus is suitable for corona electrostatic spraying.

Recommended film thickness	60-80 µm A good protection is linked with the recommended film thickness.
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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.
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Curing

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

Object temperature	Green curing		Full curing	
	Min	Max	Min	Max
130°C	10'	20'		
140°C	6'	14'		
150°C	4'	11'	19'	36'
160°C	3'	10'	12'	30'
170°C	2'	8'	11'	28'
180°C			10'	25'
200°C			4'	15'

For use as anti-gassing primer, a full curing must be required.

Topcoat Application

Interpon Redox Plus 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 3 weeks. A preliminary cleaning is strongly recommended before application of the top coat.

To ensure the cohesion of the Interpon Redox Plus 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 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 Redox Plus must first undergo a slight dry sanding with a 800 sandpaper. The product has to be fully cured according to the liquid PU topcoat stoving recommendations.

Damage repair

Any damage of the Interpon Redox 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.

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Appendix 1: Neutral Salt Spray Test

Coating System		Interpon Redox Plus (AL258F) + Interpon D2525 (YL108JR)	
Conditions	Substrate	Cold rolled steel panel (Italgard) 75mm x 150mm x 3 mm	
	Pretreatment	Grit blasting SA 2.5 – Ra 6-12µm - Rz 40-65 µm	
	Primer thickness	70 - 90 µm	
	Topcoat thickness	70 - 90 µm	
	Adhesion on surface before test	Class 0	
Neutral Salt Spray ISO 9227:2017	Time	Average corrosion from the scribe (mm)	Defects
	720 hours	< 1.5 mm	No blistering Brown oxidation along the scribe
	Using a 2 mm horizontal scribe according to the ISO 12944-6 (Annex A – A.1) specification		

Evaluation method

- rinse with tap water
- clean the corroded area with a sponge
- attempt to lift the coating from the scribe line with a sharp tool
- measure the average corrosion from the scribe in accordance with ISO 12944-6 (Annex A – A.2)

ISO 12944:2018 Corrosivity classes				
Category	Low < 7 years	Medium 7 – 15 years	High 15-25 years	Very High Over 25 years
C3	120h	240h	480h	720h
C4	240h	480h	720h	1 440h
C5	480h	720h	1440h	
Average corrosion creep (mm): 1,5 mm			• Neutral salt spray ISO 9227	

<http://www.interpon.com/contact-us/>

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