

Product Data Sheet

AkzoNobel Powder Coatings

Interpon Redox Plus AL117N

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 / International 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.

Powder Properties

| | |
|--|---|
| Chemical type | Thermosetting epoxy |
| Appearance | Smooth |
| Gloss level (60°) | Aspect may vary depending on curing conditions (green cure) |
| Color | Grey |
| Recommended Film Thickness (µm) | 60 - 80 µm |
| Density (g/cm³) | 1,5 ± 0,03 g/cm ³ |
| 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 |
| Pretreatment | Iron Phosphating |
| Primer Thickness | 70-90 microns |
| Curing Schedule (with topcoat) | 10 minutes at 200°C (Object Temperature) Topcoat: Interpon D1036 / D2525 60-80 microns |

Mechanical Tests

| | | |
|---|---------------------------------|--|
| Bending test (Cylindrical Mandrel) | ASTM D522-93A | Pass 5mm (Primer) Pass 4mm (System) |
| Adhesion | ASTM D 3359-97 (2mm crosshatch) | Class 0 (Primer) Class 0 (System) |
| Erichsen Cupping | ASTM E643-84 | Pass 6 mm (Primer) Pass 4 mm (System) |

| | | |
|---------------|------------|--|
| Impact | ASTM D2794 | 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 | ASTM B117 | < 4mm corrosion creep from scribe after 1000 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. | Degreasing & phosphating / chromating followed by passivation. |
| 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 |

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.

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 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.

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