

Product Data Sheet

AkzoNobel Powder Coatings

Interpon EC 1100

Product Description

Interpon EC 1100 is a series of high-performance polyurethane powder coatings formulated in order to provide good anti-graffiti properties with good aesthetic appearance.

Interpon EC 1100 is suitable for outdoor applications and is available in a range of colors. This series has been developed to meet the main product specifications required defined in the markets such as railways, subways and urban furniture where anti-graffiti performance plays a crucial role. **Interpon EC 1100** utilizes zero emission Polyurethane technology which provides environmental and H&S benefits during the curing process.

Interpon EC 1100 is available in smooth, fine & coarse texture finishes with gloss level from semi-matt up to high gloss.

Powder Properties

Chemical type	high-performance polyurethane
Gloss (60°)	50-100
Recommended Film Thickness (µm)	60 - 90 µm
Density (g/cm³)	1.20-1.60 g/cm ³ (Please consult CoA of product)
Application	Electrostatic
Storage	Dry cool conditions below 30°C (open boxes must be resealed)
Shelf life	12 months
Curing schedule (object temperature)	15-20 minutes at 190°C 10-15 minutes at 200°C 8-12 minutes at 210°C

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	0.6mm degreased steel
Pretreatment	Zinc Phosphate
Film Thickness	60 - 70 microns
Cure Schedule	20 minutes at 190°C (object temperature)

Mechanical Tests

Flexibility (Cylindrical Mandrel)	ISO 1519	Pass 10 mm*
Adhesion (2mm Crosshatch)	ISO 2409	Class 0
Erichsen Cupping	ISO 1520	>3 mm*
Pencil Hardness	ASTM D 3363	H-2H
Impact (d/r)	ISO 6272	15 kg·cm*
Hardness (Buchholz)	ISO 2815	>80

(*) Depending on color can be some cracking but not delamination

Chemical & Durability Tests Aluminium substrate	Acetic Acid Salt Spray (1000 hours)*	ISO 9227	Pass -no corrosion creep more than 3mm from scribe
	Cyclic Humidity (1000 hours)*	ISO 6270-1	Pass - no blistering or loss and creep <1mm from scribe
*Chromated Aluminium or equivalent			
Steel substrate	Neutral Salt Spray (500 hours)**	ISO 7253	Pass -no corrosion creep more than 3mm from scribe
**Zinc Phosphate steel			
Others	Chemical resistance	Excellent chemical resistance to acid, alkalis, oils and chemicals at room temperature.	
	Anti-graffiti performance	Good anti-graffiti performance	
	Exterior Durability	Suitable for outdoor exposure	

Anti-graffiti properties

Interpon EC 1100 has been developed to satisfy the main specifications available in the railways, subways and urban furniture markets.

For railway application contact AkzoNobel for individual technical datasheet for each used product.

In general, the anti-graffiti properties depend upon many factors such as:

- Color and type of finishes of the coatings.
- Procedure used to evaluate the anti-graffiti property, particularly:
 - o Method of application of the graffiti.
 - o Method of removal of the graffiti.
 - o Type of graffiti.
 - o Conditioning (temperature and timing) of the coated sheets both after the application and after the removal of the graffiti
 - o Type of remover used
 - o Procedure to remove the graffiti

For this reason, please contact AkzoNobel for any clarifications.

Anti-graffiti cycle test

Here below an example of antigraffiti test to be used in lab to assess the performances of the coatings.

Step	Description	Details
1	Graffiti deposition	<u>Graffiti types:</u> - acrylic spray, permanent marker, Red lipstick or - Permanent marker, acrylic spray, nitro/acrylic spray, acidic spray, water-based spray
2	Ageing (of the graffiti)	2hrs@80°C or 8hrs@40°C
3	Cleaning (graffiti removing)	Removing of the graffiti with defined remover and protocol
4	Re-conditioning of the coatings	2hrs@room T or 24hrs@room T

Step 1-4 to be repeated 10 times (10 cycles of graffiti removal in the same place). At the end a visual assessment has to be carried out checking the appearance of the film (graffiti removal and softening).

Application

Interpon EC 1100 powders can be applied by manual or automatic electrostatic spray equipment. Unused powder can be reclaimed using suitable equipment and recycled through the coating system. Re-coat (overcoating) is not recommended.

Pre-treatment	Aluminium, steel surfaces to be coated must be clean and free from grease. Iron phosphate and particularly zinc phosphating of ferrous metals improves corrosion resistance. Aluminium substrates may require a chromate conversion coating or equivalent.
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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.
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Disclaimer	<p>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.</p> <p>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.</p>
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