

Technical Datasheet

Interpon EC 1301



Highly chemical resistant powder coatings with excellent anti-graffiti properties

Product description

Interpon EC 1301 is a series of high-performance polyurethane powder coatings formulated in order to provide excellent anti-graffiti properties with good aesthetic appearance.

Interpon EC 1301 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 1301 formulation utilizes moderate emission Polyurethane technology during process.

Interpon EC 1301 is available in smooth finishes with gloss level from satin (50GU) up to high gloss (100 GU).

Powder properties

	Typical value
Chemical Type	High-performance Polyurethane
Appearance	Smooth
Density	1.2 - 1.6 g/cm ³ , depending on colour and effect
Recommended film thickness	60 - 90µm
Shelf life	12 months below 30 °C
Storage Conditions	Under dry, cool ($\leq 30^{\circ}\text{C}$) conditions (open boxes must be resealed)
Curing schedule	15-20 min at 190°C 10-15 min at 200°C 8-12 min at 210°C

Pre-treatment

Iron phosphate and particularly Zinc phosphating of ferrous metals improves corrosion resistance. Aluminium substrates may require a chromate conversion coating.

Aluminium, steel or Zintec surfaces to be coated must be clean and free from grease.

Application

Unused powder can be reclaimed using suitable equipment and recycled through the coating system. Re-coat (overcoating) is not recommended.

Powders can be applied by manual or automatic electrostatic spray equipment.

Application Method	Electrostatic
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Test conditions

Testing has been determined under laboratory conditions using the following application properties and is for guidance only. The results are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only

Acetic Acid Salt Spray test: Aluminium substrate (Chromated Aluminium or equivalent)

Pre-treatment	Zinc Phosphate
Substrate	0.6mm degreased steel
Curing schedule	20 min at 190°C (object temperature)
Film Thickness	60 - 70µm

Mechanical tests

	Typical value	Method/standard
Adhesion	Class 0	ISO 2409 (2 mm Crosshatch)
Hardness	>80	ISO 2815 (Buchholz hardness)
Pencil hardness	H-2H	ASTM D 3363

Chemical and durability tests

	Typical value	Method/standard
Chemical Resistance	Excellent good resistance to acid, alkalis, oils and chemicals at room temperatures.	
Salt spray test	Pass, no corrosion creep more than 3 mm from scribe, ISO 9227 500 h	
Anti-graffiti performance	Excellent anti-graffiti performance	

Environmental and durability tests

	Typical value	Method/standard
Acetic acid salt spray	Pass - no corrosion creep more than 3mm from scribe, ISO 9227 1000 h	
Humidity	Pass - no blistering, creep <1mm, 1000 h	ISO 6270-2 CH (Constant humidity)
Exterior durability	Suitable for outdoor use	

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Additional Information

Due to its high chemical crosslinking density, Interpon EC 1301 has low film flexibility.

Anti-graffiti properties

Interpon EC 1301 has been developed to satisfy the most critical antigraffiti specifications (like SNCF) available in the railways, subways and urban furniture markets.

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 1

Graffiti deposition

Graffiti types: acrylic spray, permanent marker, Red lipstick

or

Permanent marker, acrylic spray, nitro/acrylic spray, acidic spray, water-based spray

Step 2

Ageing (of the graffiti)

2hrs@80°C or 8hrs@40°C

Step 3

Cleaning (graffiti removing)

Removing of the graffiti with defined remover and protocol

Step 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).

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

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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