

# Technical Datasheet

## Interpon EC 1100



Highly chemical resistant powder coatings with anti-graffiti properties

### 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

	Typical value
<b>Chemical Type</b>	High-performance Polyurethane
<b>Density</b>	1.2 - 1.6 g/cm <sup>3</sup> , depending on colour and effect
<b>Recommended film thickness</b>	60 - 90µm
<b>Shelf life</b>	12 months below 30 °C
<b>Storage Conditions</b>	Under dry, cool ( $\leq 30^{\circ}\text{C}$ ) conditions (open boxes must be resealed)
<b>Curing schedule</b>	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.

<b>Application Method</b>	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	Good 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

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Due to its high chemical crosslinking density, Interpon EC 1100 has low film flexibility.

#### 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 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

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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

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**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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