# 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/cm³, depending on colour and effect |
| **Recommended film thickness** | 60 - 90µm |
| **Shelf life** | 12 months below 30 ºC |
| **Storage Conditions** | Under dry, cool (≤ 30°C) conditions<br>(open boxes must be resealed) |
| **Curing schedule** | 15-20 min at 190°C<br>10-15 min at 200°C<br>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, 500 h | ISO 9227 |
| **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, 1000 h | ISO 9227 |
| **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 antigrafitity 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 antigrafitity 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 and a visual assessment has to been 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







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