

# Technical Datasheet



## Interpon 200 Cr

### UW0094 Chrome Silver

Chrome-silver-effect polyurethane powder coatings

## Product description

**Interpon 200 Cr** is a series of polyurethane-based powder coatings designed for the exterior environment offering excellent corrosion resistance and flexibility properties. Exceptionally smooth flow and high gloss make **Interpon 200 Cr** powders ideal for applications where a high level of aesthetic finish is required.

Please note that **Interpon 200 Cr** are not designed for architectural applications. To prevent oxidation of the basecoat, a clear coat must always be applied.

## Powder properties

|                                   | Typical value   |
|-----------------------------------|---|
| <b>Chemical Type</b>              | Polyurethane  |
| <b>Appearance</b>                 | Smooth Gloss  |
| <b>Color</b>                      | Chrome Silver   |
| <b>Density</b>                    | 1.2 - 1.9 g/cm <sup>3</sup>   |
| <b>Finish Effect</b>              | Bonded  |
| <b>Recommended film thickness</b> | 70 - 90µm   |
| <b>Shelf life</b>                 | 24 months   |
| <b>Storage Conditions</b>         | Under dry, cool ( $\leq 30^{\circ}\text{C}$ ) conditions<br>(open boxes must be resealed) |
| <b>Curing schedule</b>            | 15-20 min at 190°C<br>10-15 min at 200°C  |

## Pre-treatment

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

Aluminium components should receive a full multi-stage chromate conversion coating or suitable chrome-free pre-treatment or suitable pre-anodising to clean and condition the substrate. Detailed advice should be sought from the pre-treatment supplier.

## Application

Bonded products have better application properties than blended products (more stable) but attention should still be paid to line settings in order to avoid "marble effect" and changes in aspect after recycling.

Products with different codes should not be mixed even if same colour and gloss.

Different substrates (aluminium, steel, galvanized steel...), use of primer, and big changes in film thickness may give a different aspect.

It is recommended that for consistent application and appearance product be fluidized during application.

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

|                           |   |
|---------------------------|---|
| <b>Application Method</b> | Electrostatic   |
| <b>Recycling</b>          | Unused powder can be reclaimed using suitable equipment and recycled through the coating system, but a minimum of 70% virgin powder should be used. |

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## Test conditions

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

Testing has been determined under laboratory conditions using the following application properties and is for guidance only.

The test results are shown below based on a single layer application of Interpon 200 Cr without application of a clearcoat.

|                 |                                      |
|-----------------|--------------------------------------|
| Pre-treatment   | Zinc Phosphate                       |
| Substrate       | Polished steel                       |
| Curing schedule | 10 min at 200°C (object temperature) |
| Film Thickness  | 70 - 90µm                            |

## Mechanical tests

|                   | Typical value                      | Method/standard            |
|-------------------|------------------------------------|----------------------------|
| Adhesion          | Class 0                            | ISO 2409 (2 mm Crosshatch) |
| Erichsen cupping  | Pass 5 mm                          | ISO 1520                   |
| Flexibility       | Pass 5 mm                          | ISO 1519                   |
| Hardness          | Pass - no penetration to substrate | ISO 1518-1 (2000g)         |
| Impact resistance | ≥30 kg.cm                          | ISO 6272-2 (d)             |

## Chemical and durability tests

Whilst maintaining the general protective and anti-corrosive properties of powder coatings, aluminum and copper/bronze metallic finishes, when submitted to the listed tests, may rapidly show a loss of metallic aspect. 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.

The chrome basecoat should be protected by a powder or liquid clearcoat before chemical performance tests. The test results are shown below based on a Interpon 200 Cr and clearcoat.

|                     | Typical value   | Method/standard |
|---------------------|---|-----------------|
| Chemical Resistance | Excellent resistance to acid, alkalis, oils and chemicals at room temperatures - as dual system with clearcoat. |                 |
| Salt spray test     | Pass, no corrosion creep more than 3 mm from scribe, 500 h  | ISO 9227        |

## Environmental and durability tests

|                     | Typical value  | Method/standard                   |
|---------------------|--|-----------------------------------|
| Humidity            | Pass - no blistering or loss of gloss, 1000 h                | ISO 6270-2 CH (Constant humidity) |
| Exterior durability | Suitable for outdoor exposure as dual system with clearcoat. |                                   |

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## Repair

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**Surface preparation**

Sanding + Air cleaning

Any damage of the coating system must be repaired as soon as possible.

**Application**

For repairs a PU (2K or 1K) liquid paint is recommended.

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## Additional Information

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Interpon polyurethane powders are available in a wide range of colours and gloss levels to suit different applications. Some polyurethane powders release a small amount (1.5%) of ε-caprolactam on stoving. Care should be taken to ensure that working concentrations of caprolactam are kept below 25mg/m<sup>3</sup>. Interpon 200 powders are available in bright aluminium finishes which are susceptible to scratching and finger marking. Protection by use of a clear polyester top coat is recommended when the coated article is to be subjected to physical damage or environmental damage. The top coat should ideally be applied within 2 hours of the metallic coating and gloves should be worn when handling the metallic coated articles. For further details on the use of metallic powder coatings please contact AkzoNobel.

Please note that Interpon 200 Cr are not designed for architectural applications. To prevent oxidation of the basecoat, a clear coat must always be applied.

Flat jet spray nozzles  
Voltage: around 50-70 kV  
Current 80mA  
Main Air Pressure 0.7 Bar  
Slow first passes  
A soft powder cloud should be used  
Distance gun-part: 20 to 25 cm  
Dilution Air Pressure 0.7 Bar

To ensure powder homogeneity the powder should only be fed from a fluid bed feed hopper. Direct feed from the powder box is not recommended.

To maintain the bright metallic appearance the powder should not be recycled.

Ensure the coating is fully cured before application of the clear topcoat. Failure to fully cure the basecoat can result in disruption of the clearcoat surface at the coating-coating interface after application and curing of the clear coat. This will lead to a reduction in the gloss of the final coating and a reduced metallic effect. This can also lead to discoloration of the clear coat.

### Special effects guide

Special effect powders are products requiring some special procedures and techniques in comparison with solid shades, particularly in application. To ensure that end user is satisfied they need special attention, both in the powder coatings production factory and on the premises where they are being applied.

Metallic finishes are by nature more sensitive to variations in appearance than solid shades. When the product is to be applied on a mass production basis, manufacturers should put special procedures in place to ensure the best possible repeatability.

When it comes to application, it is advisable to comply with some basic rules like:

- \*Produce presentation ("visual reference") panels before executing the whole order
- \*Submit a coated panel to the customer for approval
- \*Supply a project wherever possible in one single campaign all with the same batch of powder
- \*Discharge small cartons of powder into hoppers to make the powder more homogeneous
- \*Avoiding moving spray guns in a figure of eight motions when applying manually

Experience dictates that with many special effect powder finishes they may be a strong dependence on the application equipment. A basic rule to try and get accepted by all interested parties on a contract is that more color variation is likely to occur than for traditional solid shade finishes.

## 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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