Technical Datasheet

Interpon 310 Low-E

Low cure polyester powder coatings for indoor applications

Product description

Interpon 310 Low-E is a series of polyester resin based thermo-setting powder coatings, without TGIC. The **Interpon 310 Low-E** resin system is warning label free. The pigments used in the Interpon 310 Low-E series restrict the field of application of this powder coatings class to interior uses. **Interpon 310 Low-E** is designed for interior decoration such as, metal furniture, shop fittings, shelves, light fittings.

The products in the range are engineered to minimize the formation defects such as pinholes caused by air bubbles in the paint film due to gas release in porous substrates during curing.

The cured coating shows no blooming effect. They are also easy to apply and can be cured from 150-170°C thereby offering potential energy reductions during the cure process.

Powder properties

	Typical value
Chemical Type	Polyester – TGIC Free
Density	1.2 - 1.9 g/cm³, depending on colour and effect
Recommended film thickness	60 - 90µm
Shelf life	24 months below 30 ºC
Storage Conditions	(open boxes must be resealed) Dry, cool conditions
Curing schedule	23-35 min at 150°C 12-30 min at 160°C 8-20 min at 170°C 5-10 min at 180°C (at object temperature)

Pre-treatment

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

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Application

Powders can be applied by manual or automatic electrostatic spray equipment.
A good protection is linked with the recommended film thickness.
All powders can show small color differences from batch to batch, this is normal and unavoidable.
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.

Application Method	(depends on the product, please consult Akzo Nobel for more information), Tribo, Electrostatic
Recycling	Unused powder can be reclaimed using suitable equipment and recycled through the coating system, but a minimum of 70% virgin powder should be used.

Post application

Contact, even for a short duration with certain household products and chemicals, can cause irreversible changes in the gloss and appearance. We recommend that a test is carried out on a non-visible area before using these types of products on this coating.

Test conditions

Actual product performance will depend upon the circumstances under which the product is used.
Testing has been determined under laboratory conditions using the following application properties and is for guidance only.

Pre-treatment	Zinc Phosphate
Substrate	Polished steel
Curing schedule	12 min at 200°C (object temperature)
Film Thickness	60 - 70µm

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)

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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.

	Typical value	Method/standard
Salt spray test	Pass, no corrosion creep more than 3 mm from scribe, 500 h, Steel Panels 0,8 mm	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	Some chalking and loss of gloss after 3-6 months continuous outdoor exposure. Protective properties retained. Not recommended for outdoor applications.	

Maintenance

For specific advice on Cleaning and Maintenance, please follow Powder Coatings: Cleaning & Maintenance of Surfaces for Industrial use available from AkzoNobel.

Repair

Surface preparation	Damaged areas must be clean and free of grease or rust. Dry-sand the area with 600 grade paper down to the substrate. The area must be completely free of dust and cleaned with a non-aggressive solvent before proceeding. 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.

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.

Disclaimer

http://www.interpon.com/contact-us/

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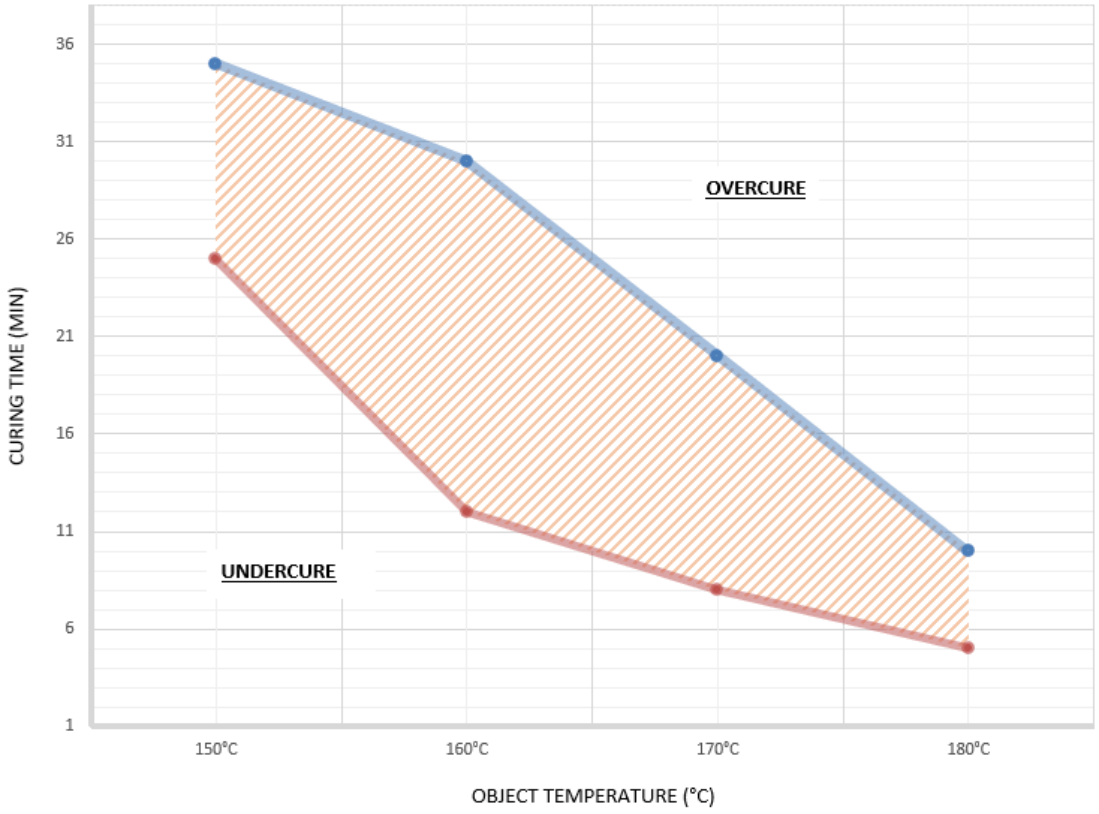
Appendix

Curing Window Interpon 310 Low-E



Disclaimer:

The data contained in this Curing Window graph is obtained from laboratory coating trials under ideal curing conditions, and using perfectly prepared uncoated testing panels; consequently the curing window needs to be regarded as indicative only.
To ensure the correct curing is achieved, specific thermal and performance checks should be

Minimum cure

Maximum cure

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