

Product Data Sheet

AkzoNobel Powder Coatings

Interpon Align YE005E

Product Description

Interpon Align is a “2C1B” (two-coat, one-bake) powder system comprised of a powder primer layer and an exterior color layer that are tailored to the coater / manufacturer specifications and processing requirements. The two specially formulated powder coating layers are applied to the component which is then put through a single curing process. This eliminates the need for a primer curing process before the topcoat is applied and offers the end coater considerable savings in energy, operational costs and time.

Powder Properties

Chemical type	Polyester
Product type	Topcoat
Markets	ACE/Cross-market segment products
Appearance	Yellow, gloss
Gloss	20° ≥ 60; 60° ≥ 75-90 gloss units
Particle Size	Suitable for electrostatic spray
Specific gravity	1.4 ± 0.1g/cm ³
Coverage	9.5 m ² /kg (100% utilization @ 75 microns)
Storage	Under dry, cool (< 25°C) conditions, at least 12 months from production date (open boxes must be resealed)
Cure schedule (object temperature)	10-25 minutes @ 210-160 °C curing window. Bake schedule dependent on part thickness and heat up rate necessary to achieve specified temperature. Failure to observe the correct curing conditions may cause differences in color, gloss the deterioration of the coating properties

Comments

Interpon Align YE005E is a superior UV and weather resistant TGIC-free polyester designed for exterior use with Yellow color and high gloss effect. **Interpon Align YE005E**, offers the benefit of curing with lower oven temperature settings or increasing line speeds to improve throughput under normal temperature settings. **Interpon Align YE005E**, can be applied directly over an **Interpon Align** primer or as a single coat only, with excellent smooth appearance high gloss and high DOI properties.

Test Conditions

The results shown below are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only. Actual product performance will depend upon the circumstances under which the product is used.

Substrate	Cold rolled steel (0.8mm)
Pretreatment	Iron phosphate (B1000)
Film Thickness	60-90 microns
Stoving Schedule	15 minutes @ 160°C

Mechanical tests

Flexibility	BS EN ISO 6860	No cracking beyond first scribe line
Adhesion	BS EN ISO 2409	≤5% removed (2mm crosscut)
Impact resistance	BS EN ISO 6272-1	Direct ≥40 kg.cm, Reverse ≥20 kg.cm
Pencil hardness	BS EN ISO 15184	Pass 2H (gouge)

Chemical and Durability tests

Neutral Salt Spray	BS EN ISO 9227	240hr, <2mm creep from scribe
Cyclic corrosion	BS EN ISO 9227 ASTM D2247	40 cycles, <2mm creep from scribe
Sulphur dioxide	ISO 3231	6 cycles, no visible deterioration

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	Florida exposure	12 months	Gloss retention (60°) ≥ 90% Color change ΔE ≤ 5.0
	Accelerated weathering	ISO 11341 (1500 hours exposure)	Color change ΔE ≤ 5.0
	Chemical resistance	Good resistance to distilled water, engine coolant, engine oils and hydraulic fluid	
Pre-treatment	<p>When applying as part of an Interpon Align two layer system, refer to the appropriate primer and topcoat datasheets</p> <p>Interpon Align YE005E is suitable for application onto metal substrate surfaces cleaned of oil and grease and applied at ambient or higher substrate temperature range. Surface preparation depends upon the metal, the type of surface, its condition and the required performance. For good protection against corrosion either mechanical or chemical surface treatment or both, should be performed.</p> <p>Mechanical treatment: Blast profile impacts corrosion and potentially appearance, with grit blasting preferred. Substrate preparation, surface roughness, and condition must be confirmed as suitable for Interpon Align™.</p> <p>Remove dust by blowing with clean dry air or brush with a soft brush. Make sure that the particles removed do not contaminate other surfaces that have already been dusted. Blast-cleaned parts must not be handled with bare hands prior to coating. Use clean, lint-free gloves. Prior to blast-cleaning, it is advised that parts/substrate are kept at relative atmospheric humidity less than 85% and/or at object temperature greater than 3°C above the dew point to ensure proper substrate conditioning. Laser cut parts or contaminates from cutting may require mechanical or chemical removal.</p> <p>Chemical treatment: To reinforce the anti-corrosion protection, or for practical assembly line reasons, chemical treatment may be performed in accordance with material supplier instructions.</p>		
Application	<p>Interpon Align YE005E can be applied by manual or automatic electrostatic spray equipment. Powder can be fed from either box feeder or fluid bed equipment. A recommended film thickness range of 25-90 microns, depending on aesthetic and performance requirements. Optimum aesthetics and film performance achieved at 60-90 microns to ensure coverage of the metal surface, especially for grit blast profiled surfaces. Suitable bake schedules should be determined in association with technical assistance, dependent upon object metal thickness, mass and dimension.</p>		
Safety Precautions	<p>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.</p>		
Disclaimer	<p>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 fulfill 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. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.</p> <p>Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel</p>		

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