



HMG Powder Coatings Limited

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Crystal Clear

837-0S600P-1428

Product Description	An exterior durable system offering excellent corrosion resistance, gloss retention and mechanical properties. Designed primarily as a final finish coat for alloy wheels, the product contains an optical brightener that negates the natural yellowing that occurs when a standard clear is used over metallic effects, especially chrome finishes.		
Key Benefits	Reduces yellowing when coated over metallic Non-acrylic system High Build without losing DOI		
Powder Properties	Chemistry	Thermosetting carboxylated polyester cured with a multifunctional curing agent.	
	Application	Corona electrostatic and tribostatic spray.	
	Coating Thickness (DFT)	General recommendation is 60-100 microns (μm), with a minimum thickness of 60 μm .	
	Gloss (ISO 2813)	Gloss	>96 GU
	Specific Gravity	1.20 g/cm ³	
	Theoretical Coverage	From 14 m ² /kg at 60 microns film thickness.	
	Storage & Shelf Life	When stored in a cool (<20°C), dry environment: 12 months.	
	Curing Schedule	7 minutes at 210 Celsius 10 minutes at 200 Celsius To prevent cracking, full cure must be obtained. We recommend that where the coatings may be subjected to temperatures above 210°C, a trial is first carried out to ensure there is no unwanted colour variation. Direct-fired gas ovens may also cause colour to change from the expected result.	
Pretreatment	To ensure maximum adhesion the substrate must be thoroughly clean, free from grease, oil, rust, mill scale or any other contaminant. Cleaning may be carried out either by shot blasting, solvent or chemical degreasing. For applications where high corrosion or chemical resistance is required the substrate should be chemically treated prior to powder coating, typically:		
	Ferrous substrates	iron or zinc phosphate	
	Zinc coated steel	zinc phosphate or chromate conversion	
	Aluminium	chromate conversion	
Mechanical Tests	Unless otherwise specified, all tests were carried out under laboratory conditions on 0.8mm degreased and zinc phosphated steel panels. A powder coating DFT of 60-70 microns was used.		
	Hardness	ISO 2815 Buchholtz Indentation	>80
	Flexibility	ISO 1519 Cylindrical Mandrel	Pass >5mm
	Adhesion	ISO 2409 2mm Crosshatch	Pass Gt0
	Cupping	ISO 1520 Erichsen	Pass >4mm
	Impact	BS 3900: Part E7	>20kg cm (N)
Corrosion and Durability	Sulphur Dioxide	Kesternich Test ISO 3231	After 24 cycles, infiltration <1mm from scratch
	Neutral Salt Fog	ASTM B117 (500 hours)	Corrosion creep <2mm from scratch Adhesion – Gt0

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Mortar Resistance	ASTM C207	Easy to remove. No staining
Boiling Water	2 hours boiling water	No defects or detachments
Humidity	BS3900: Part F2	Pass. 1000 hours without any effect.
Exterior Durability	After 12 months, minimal loss of gloss or colour change. No film breakdown or reduction in protective properties	

Chemical Resistance	This product shows excellent resistance to water, brine, hydrochloric acid, dilute sulphuric, acetic and phosphoric acids, dilute alkalis, peroxides and bleach, alcohols and urea.
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Colour Availability	Not Applicable – a clear system.
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Application Tips	<p>To achieve optimum brightness, the film thickness should be kept as low as possible whilst still achieving good flow.</p> <p>This system is sensitive to under-cure. Where the system is under-cured, cracking can occur over time. Significant under-cure can result in cracking hours or days after the product has cooled, but cracking may not occur for some weeks if under-cure has only been slight. Take steps to ensure complete cure, testing the cure of the product as appropriate. Where under-cure has occurred, re-stoving the product at the correct cure temperature will normally correct the issue.</p>
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RoHS/RoHS2/RoHS3	This product range conforms to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations Directives. Refer to our full statement on the hmgpowdercoatings.co.uk website.
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Health & Safety	This product is intended for use only by professional applicators in industrial environments. Consult the relevant health and safety data sheet indicated in the box label before use.
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