



HMG Powder Coatings Limited

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Candy Polyester

Part of the 837 Polyester Series

Product Description	This range of tinted lacquers, sometimes called Candy Colours, is based on exterior durable polyester technology. The colours offer a lustrous product very suitable for applications where a striking unusual aesthetic is desired. Common applications include office furniture, bicycle and motorcycle frames, alloy wheels and children's toys. As the coating is transparent, the final colour will be affected by the colour of the substrate and the thickness of the coating. Careful control of these parameters can provide the applicator with a very striking finish. For an unusual effect, consider using these products over a Black/Silver antique finish. These colours can be blended with metallic effect sparkle pigments to produce a very attractive effect.		
Powder Properties	Chemistry	Thermosetting carboxylated polyester cured with a multifunctional curing agent.	
	Application	Corona electrostatic spray. The system can be modified for Tribo application as required.	
	Coating Thickness (DFT)	General recommendation is 60-100 microns (μm), with a minimum thickness of 60 μm . As these effects have a low opacity, their colour will vary depending on DFT; we recommend a tightly controlled DFT range to achieve an even colour effect.	
	Gloss (ISO 2813)	Gloss	85 \pm 10
		Matt	10 \pm 5
	Specific Gravity	1.20 – 1.30 g/cm ³ depending on colour.	
	Coverage	From 13-14 m ² /kg at 60 microns film thickness.	
	Storage & Shelf Life	When stored in a cool (<20°C), dry environment: 12 months.	
	Curing Schedule	See box label for curing conditions. Typical object temperature conditions are: <ul style="list-style-type: none">• 10 minutes at 180 Celsius	
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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Candy Polyester

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. No film breakdown or reduction in protective properties	

Colour Durability (Light Fastness)	It is the responsibility of the user to determine whether the UV (light) stability of the Candy system is appropriate for the intended end use; weathering stability may be reduced when compared to fully opaque colours. The reduced stability will vary from colour to colour. Overcoating with a super-durable clear coat may not increase the intrinsic light stability of the pigment.	
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Chemical Resistance	The range 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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Fire Resistance	Construction	
	The range has been tested to the requirements of BS 476 parts 6 & 7 and has a Class 0 surface as defined in various national building regulations.	
	The range has been tested to the requirements of EN 13823 and ISO 1716 and is classified as A2 s1 d0 according to EN 13501-1	
	Rail	
	Additional to the above, the range has been tested to EN 45545-2+A1 Annex C and meets the requirements of London Underground S1085 'Fire Safety Performance of Materials'.	

Application	The coating may be applied over a variety of substrates. As the effect is translucent the final colour will be dependent on the underlying substrate colour and the film thickness of the coating (a higher film build will result in a more intense colour, but with reduced translucency). Excellent results are obtained coating polished aluminium, chrome or bronzed pipe. Where the substrate is dark or stained, use a bright base coat such as a chrome effect powder coating. Similarly to achieve a sparkle effect, use an appropriate silver sparkle effect powder coating as a first layer.	
	Tips	
	<ul style="list-style-type: none">• When over-coating, ensure the electrical earth is sound. We recommend connecting the work to a grounding rod and grounding clamp assembly rather than the spray gun. In any case, a resistance of <0.5 megaohm is recommended and <1.0 megaohm is vital. A poor electrical earth will result in poor penetration into the corners and recesses.• When over-coating, select the correct gun settings. Most guns have an 'overcoat' setting which reduces the voltage (kV) at the gun tip.• Test the coating first to determine the best film thickness for your application; the final colour can be fine-tuned by careful DFT control.• Consider the applicability of the gun nozzle. Flat nozzles are useful for getting into corners, but as they are directional, may give colour striations caused by varying film thicknesses.• Increase the distance from the gun to the part; provided the electrical earth is good, the candy colour will be attracted to the part and deposit at a more even film build.	

Colour Availability	A selection of colours is available ex stock as part of the Signature Finish™ range. Other colours are available on request.	
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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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