



HMG Powder Coatings Limited

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Polyester Metallic & Special Effect

916 Series

Product Description	Designed for both exterior and internal use, this range of powder coatings offers both good outdoor durability and decorative aspect. The range incorporates a blend of carefully chosen exterior durable polyester powder coating and one or more special effect pigments to give a range of effects, including metallic, anodic, pearlescent and sparkle. These coatings provide a very attractive finish to brighten any object.		
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)	Depending on covering power and shade, general recommendation is 60-100 microns (µm), with a minimum thickness of 60 µm.	
	Gloss (ISO 2813)	Gloss Semi-Gloss Matt	
	Specific Gravity	1.40 – 1.70 g/cm ³ depending on colour.	
	Coverage	From 10-14 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 >5mm
	Impact	BS 3900: Part E7	>20kg cm (N)
Corrosion and Durability	Neutral Salt Fog	ASTM B117 (500 hours)	Corrosion creep <2mm from scratch Adhesion – Gt0
	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	

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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.
Colour Availability	A range of colours are available from stock. Any submitted colour standard can be manufactured to customer's requirements
Bonding	The process of 'bonding' fuses the blend of metallic effect particles to the powder coating base colour, resulting in better uniformity of colour, better charging characteristics and the option to recover and re-use over-spray. The range is generally not bonded unless specifically requested at the time of order. Bonding does not improve the exterior durability of a coating, in fact the opposite is more likely to be true, albeit a minor effect.
Application Tips	<p>Metallic effects need some additional considerations to standard powder coating before application to achieve the best results. The following information is primarily for the application of blended metallic, however it does also have applicability for bonded systems.</p> <ul style="list-style-type: none">• 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.• Test the coating first – different application settings can achieve quite dissimilar effects.• When using reciprocating guns, the speed should be kept the same or increased compared to standard colours. This reduces the risk of 'striping'.• The gun to part distance must be kept constant. As the gun approaches the part, the metallic look will increase. This is owing to the heavier metallic effect pigments falling away from the part if the distance to further.• Monitor gun nozzles during the application and remove any build-up before spitting can occur.• Owing to the higher specific gravity of metallic effect pigments, fluidisation may need to be increased. Fluidised beds are preferable to box fed systems.• Raising the kV will generally increase the metallic effect; however it is simpler to reduce the gun to part distance.• Blended products should not be reclaimed, i.e. they should be sprayed to waste.• For Bonded products, a maximum of 10% reclaim should be added back to virgin powder.
Restriction of Hazardous Substances (RoHS/RoHS2)	This product conforms to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations (RoHS and RoHS2) Directive. It does not contain any compounds of lead, mercury, cadmium or hexavalent chromium; nor does it contain polybrominated biphenyls (PBBs) or polybrominated diphenyl ether (PBDE).
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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