HMG Powder Coatings Limited

Dill Road, Castlereagh Industrial Estate, Belfast, BT6 9HU
Tel. +44 (028) 9079 4930 Fax. +44 (028) 9040 1187
www.hmgpowdercoatings.com
sales@hmgpowdercoatings.co.uk

Polyester Nylon Reinforced

Product Description	Designed for both exterior and internal use, this range of powder coatings offers both excellent outdoor durability and decorative aspect. In addition to high corrosion resistance, optimum mechanical properties and excellent gloss retention, the system incorporates a nylon modification resulting in a tough surface, resistant to scuffing, abrasion and marring. The product is often used in applications such as handrails, fence parts, wheel runners, etc.		
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	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^{o}C), dry environment: 12 months.	
	Curing Schedule	See box label for curing conditions. Typical object temperature conditions are: • 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 Zinc coated steel Aluminium	iron or zinc phosphate zinc phosphate or chromate conversion 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	>25kg cm (N)
	Scratch	BS 3900: Part E2	Pass 4kg
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
	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.

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	Exterior Durability	After 12 months, minimal loss of gloss or colour change. No film breakdown or reduction in protective properties
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.	
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'.	
Colour Availability	All colours from BS 5252, BS 4800, BS 381C, RAL Classic, RAL Design, Pantone and NCS ranges. Any submitted colour standard can be manufactured to customer's requirements	
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.	
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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