



HMG Powder Coatings Limited

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HMG Powder Coatings

Architectural Polyester

Product Description Designed for both exterior and internal use, this range of powder coatings offers both excellent outdoor durability and decorative aspect. Designed for use on architectural applications such as fences, buildings facia and window frames, the range meets the requirements of:

- BS EN 12206-1 (previously BS 6496)
- BS EN 13438 (previously BS 6497)
- Qualicoat Class 1

Powder Properties	Chemistry	Thermosetting carboxylated polyester cured with a multifunctional curing agent.	
	Application	Corona electrostatic spray. The system can be supplied for Tribo application as required.	
Gloss (ISO 2813)	Gloss	85 ± 10	
	Semi-Gloss	60 ± 7	
	Matt	30 ± 5	
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 – Gloss & Semi-Gloss • 10 minutes at 200 Celsius – Matt 	

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 aluminium panels prepared to the specifications described in the Qualicoat Standard. 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)

Corrosion and Durability	Sulphur Dioxide	Kesternich Test ISO 3231	After 24 cycles, infiltration <1mm from scratch
	Salt Fog	Acetic Acid ISO 9227	After 1000 hours, per 10cm scratch: Total Corrosion <16mm ² Maximum Length <4mm
	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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Weathering	Natural Weathering	Florida Sun Test ISO 2810	After 12 months exposure, residual gloss > 50%
	Accelerated Weathering	Xenon SUN Test ISO 11341	After 1000 hours, residual gloss > 50%
		UV-B 313 Test ISO 11507 0.75 W/m ² /nm	After 300 hours, residual gloss >50%
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	<p>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.</p> <p>Aerospace: the range has been tested to and meets the requirements of various international fire tests as follows: the flammability requirements of FAR/JAR 25.853 Appendix F Part 1 (Vertical Burn Test); The heat release requirements of FAR/JAR 25.853 Appendix F Part 4; the Smoke Emission requirements of FAR/JAR 25.853 Appendix F Part 5 and ABD0031 paragraph 7.3.2; the Smoke Toxicity Emission requirements of ABD0031 paragraph 7.4.</p> <p>London Underground: the range has been tested according to the requirements of LUL 1-085 'Fire Safety Performance of Materials' and is Authorised for Use by Transport for London, LUL Product Approval number 2434.</p>		
Colour Availability	<p>A wide range of BS and RAL colours are available from stock.</p> <p>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</p>		
Restriction of Hazardous Substances (RoHS)	This product range conforms to the RoHS 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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