



HMG Powder Coatings Limited

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Epozinc 1000 Zinc-Rich Primer

Product Description	An epoxy-based powder coating primer, rich in zinc, designed to give excellent corrosion protection over steel substrates. It forms the base layer of a two-coat system and must be coated with a second coat, usually a polyester coating, for exterior use. However, epoxy or epoxy-polyester systems could be used for interior use. Owing to the product's inherent corrosion protection, it is recommended for use as part of a system to protect steel in corrosive environments such as coastal areas, industrial parks or swimming pools.	
Key Benefits	Excellent corrosion resistance Excellent chemical resistance Proven performance Excellent surface wetting Excellent adhesion to substrate Excellent overcoatability and intercoat adhesion without sanding	
Powder Properties	Chemistry	A thermosetting epoxy resin system containing >40% w/w zinc.
	Application	Corona electrostatic spray.
	Coating Thickness (DFT)	General recommendation is 60-100 microns (μm), with a minimum thickness of 60 μm .
	Gloss (ISO 2813)	60% \pm 5 on a 60 degree head
	Specific Gravity	2.60 \pm 0.1 g/cm ³
	Coverage	Approximately 6.5 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 recommendations for use.
Pretreatment	To ensure maximum adhesion the substrate must be thoroughly clean, free from grease, oil, rust, mill scale or any other contaminant. Recommended surface preparation is by solvent or chemical degreasing, followed by grit blasting (recommended blast profile: R _z 35-65 μm , R _a 6-10 μm , minimum cleanliness: SA2.5); however the substrate may instead be chemically cleaned and treated (typically a zinc phosphate system) prior to powder coating. If using a chemical treatment, discuss the performance requirements with the treatment chemical supplier.	
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, followed by a second coat of RAL 9010 827 Architectural Polyester to 60-70 microns.	
	Hardness (Epozinc)	ISO 2815 Buchholtz Indentation >80
	Flexibility (Epozinc)	ISO 1519 Cylindrical Mandrel Pass >5mm
	Adhesion	ISO 2409 2mm Crosshatch Pass Gt0
	Cupping (Epozinc)	ISO 1520 Erichsen Pass >5mm
	Impact (Epozinc)	BS 3900: Part E7 >25kg cm (N)
	Intercoat Adhesion	Hoffman Scratch Test >1500g

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Corrosion and Durability	Neutral Salt Fog	ASTM B117 (1000 hours) a) Steel, iron phosphate with final rinse b) Steel, zinc phosphate c) Steel, shot-blasted to SA 2.5	Corrosion creep <2mm from scratch Adhesion – Gt0 Corrosion creep <2mm from scratch Adhesion – Gt0 Corrosion creep <2mm from scratch Adhesion – Gt0
	Boiling Water	2 hours boiling water	No defects or detachments
	Humidity	BS 3900 Part F2	More than 1000 hours without effect
	Colour Availability	A mid grey colour.	
Recommendations for Use	Select a pre-treatment regime appropriate to the substrate and the desired performance. Where a chemical pre-treatment such as a phosphate system is used, seek advice from the pre-treatment chemical supplier. Care should be taken not to contaminate the surface before applying a second coat; over-curing the primer or handling the surface without gloves can compromise the intercoat adhesion. <ul style="list-style-type: none">• Apply Epozinc 1000 to a dry coating build of at least 60 microns, ensuring all corners and recesses are covered.• Partially cure the primer. Typically, the primer needs to be just at its gelling stage. The oven temperatures will depend on the thickness of the substrate, but typical temperatures are 5-10 minutes at 150°C• Apply and cure the top coat as soon as possible after applying primer. Discuss application parameters with the spray equipment supplier; generally reducing kV and μA to as low as possible will help penetration to difficult recesses. Handle only with gloves over-coating. The second coat may be applied whilst the primer is still warm.• Fully cure the top coat at 180-200°C object temperature. Epozinc 1000 will cure 8-10 minutes at 180°C. Should over-curing have occurred or where handling has been unavoidable, the primer may need to be slightly abraded.		
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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