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

Grey HGP Primer

Ref.: 617-2S070P-841

Product Description

An epoxy-polyester based powder coating, designed as a barrier primer coat to give corrosion protection over a number of substrates, including potentially alloy wheels.

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, for internal use it could be left as a single-coat application or over-coated with epoxy or epoxy-polyester systems.

Unlike epoxy zinc-rich primers, the HGP Primer can be fully cured before the top coat is applied making the system suitable for applications requiring liquid paint top coats or where the requirement is for a general primer for a variety of top coats.

As zinc is not used in the manufacture of this product, there is no Dangerous for the Environment labelling.

Key Benefits

Good corrosion resistance
Excellent surface wetting
Excellent adhesion
Excellent flow
Good out-gassing properties
Excellent over-coatability
Contains no ecologically toxic materials

Powder Properties

Chemistry	A thermosetting epoxy-polyester resin system.
Application	Corona electrostatic spray.
Coating Thickness	General recommendation is 60-100 microns (µm), with a minimum thickness of 60 µm.
Gloss (ISO 2813)	30% ± 5 on a 60 degree head
Specific Gravity	1.60 ± 5 g/cm^3
Coverage	Approximately 10.4 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	10 minutes at 180 Celsius (object temperature)

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 35-65µm, R_a 6-10µm, 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. HMG recommends that the coating system be tested and its applicability confirmed prior to use.

Mechanical Tests

Unless otherwise specified, all tests were carried out under laboratory conditions on 0.8mm degreased and zinc phosphate 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 (HGP Primer)	ISO 2815 Buchholtz Indentation	>80
Flexibility (HGP Primer)	ISO 1519 Cylindrical Mandrel	Pass >5mm
Adhesion	ISO 2409 2mm Crosshatch	Pass Gt0
Cupping (HGP Primer)	ISO 1520 Erichsen	Pass >5mm
Impact (HGP Primer)	BS 3900: Part E7	>25kg cm (N)
Intercoat Adhesion	Hoffman Scratch Test	>1500g

Grey HGP Primer

Corrosion and Durability	Neutral Salt Fog	ASTM B117 (600 hours) a) Steel, iron phosphate with final rinse	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 in a low sheen.		
Fire	This product meets the requirements of London Underground Standard 1-085 'Fire Safety Performance of Materials' (Certificate #1142).		
Recommendations for Use (iron phosphated steel)	Care should be taken to ensure an adequate key for the second coat; over-curing the primer or handling the surface without gloves can compromise the inter-coat adhesion. • Degrease and phosphate the steel according to the chemical manufacturer's instructions • Dry the substrate • Apply HGP Primer to a coating build of at least 60 microns • Cure the primer, but do not over-bake • 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. 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 range 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.		

HMG Powder Coatings