



# HMG Powder Coatings Limited

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## Epoxy Polyester Electrostatic Dissipative

<b>Product Description</b>	<p>Static dissipative coatings offer a colourful, environmentally-sound solution to the problem of static electricity. A potential difference occurs when any two touching objects are separated; over time this potential difference can build up on electrically insulative surfaces, eventually arcing in the form of a spark.</p> <p>While this usually results in just an annoying physical sensation, market surveys annually report considerable damage caused by electrostatic discharge, especially in the field of electronic components, where the size of componentry is ever-decreasing.</p> <p>Whilst standard powder coatings typically show resistivity values falling in the range of insulating materials, this range has been developed to effectively prevent the accumulation of an electrostatic charge.</p> <p>The range is suited for use in major appliances, including tumble dryers, electrostatic discharge protected areas, static-safe work benches, racks, trolleys, clean rooms, etc.</p>																
<b>Key Benefits</b>	<p>An electrostatic dissipative surface Good corrosion resistance Good chemical resistance Excellent adhesion Non-toxic</p>																
<b>Powder Properties</b>	<p>Chemistry</p> <p>Application</p> <p>Coating Thickness</p> <p>Gloss (ISO 2813)</p> <p>Specific Gravity</p> <p>Coverage</p> <p>Storage &amp; Shelf Life</p> <p>Curing Schedule</p>	<p>A thermosetting epoxy-polyester resin system.</p> <p>Corona spray. The system can be modified for Tribo application as required.</p> <p>General recommendation is 60-100 microns (<math>\mu\text{m}</math>), with a minimum thickness of 60 <math>\mu\text{m}</math>.</p> <p>Semi-Gloss</p> <p>1.50 – 1.80 <math>\text{g}/\text{cm}^3</math> depending on colour.</p> <p>From 10-14 <math>\text{m}^2/\text{kg}</math> at 60 microns film thickness.</p> <p>When stored in a cool (<math>&lt;20^\circ\text{C}</math>), dry environment: 12 months.</p> <p>10 minutes at 180 Celsius (object temperature)</p>															
<b>Surface Resistivity</b>	ASTM D257	$<10^9 \Omega/\text{sq}$															
<b>Pretreatment</b>	<p>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:</p> <table><tr><td>Ferrous substrates</td><td>iron or zinc phosphate</td></tr><tr><td>Zinc coated steel</td><td>zinc phosphate or chromate conversion</td></tr><tr><td>Aluminium</td><td>chromate conversion</td></tr></table>		Ferrous substrates	iron or zinc phosphate	Zinc coated steel	zinc phosphate or chromate conversion	Aluminium	chromate conversion									
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<b>Mechanical Tests</b>	<p>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.</p> <table><tr><td>Hardness</td><td>ISO 2815 Buchholtz Indentation</td><td>&gt;80</td></tr><tr><td>Flexibility</td><td>ISO 1519 Cylindrical Mandrel</td><td>Pass &gt;5mm</td></tr><tr><td>Adhesion</td><td>ISO 2409 2mm Crosshatch</td><td>Pass Gt0</td></tr><tr><td>Cupping</td><td>ISO 1520 Erichsen</td><td>Pass &gt;5mm</td></tr><tr><td>Impact</td><td>BS 3900: Part E7</td><td>&gt;25kg cm (N)</td></tr></table>		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)
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# Epoxy Polyester ESD

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<b>Corrosion and Durability</b>	Neutral Salt Fog	ASTM B117 (250 hours)	Pass – Corrosion creep <2mm from scratch
	Mortar Resistance	ASTM C207	Easy to remove. No staining
	Boiling Water	2 hours boiling water	No defects or detachments
	Humidity	BS 3900 Part F2	More than 1000 hours without effect
	Chemical Resistance	Resistant to most acids, alkalis and oils.	

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<b>Colour Availability</b>	A range of colours are available. Please contact HMG for more information.		
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<b>Restriction of Hazardous Substances (RoHS/RoHS2)</b>	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).		
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<b>Health &amp; Safety</b>	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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