

Sprayglass SG-543

Glass Flake Coating



PRODUCT DESCRIPTION	<p>Sprayglass SG-543 is a 2 component heavy duty glass flake reinforced coating applied by trowel, brush or roller. It is formulated from a Bisphenol A Epoxy Vinyl Ester resin and normally applied to give a dry film thickness of 1.75 - 2 mm. Additional coats may be required to combat severe corrosion pitting and to re-profile corrosion damaged components.</p> <p>The addition of the Sprayglass waxed topcoat helps to accelerate full cure and maximise chemical resistance. The surface finish and cosmetic appearance are also enhanced.</p>																					
SUGGESTED USES	<p>Sprayglass SG-543 is used primarily to protect steel and cast iron from corrosive attack. It is widely used in the Power Generation, Chemical and Water Treatment Industry for the reclamation of corrosion damaged components such as pump casings, water boxes, filter vessels and pipework.</p>																					
PRINCIPAL CHARACTERISTICS	<ul style="list-style-type: none">• Excellent corrosion resistance• Very good abrasion resistance• Very good erosion resistance• Excellent chemical resistance• Very low permeability• Medium temperature tolerance• Excellent undercutting resistance• Very good application properties• Excellent repair- ability• High build properties																					
VOLUME SOLIDS	98%																					
CHEMICAL & TEMPERATURE RESISTANCE	<p>Sprayglass SG-543 is resistant to a wide range of acids, alkali and bleaches. At 2mm dft it is can withstand total immersion temperatures up to 85°C and in gaseous environments temperatures up to 140°C, dependent upon the chemical environment.</p>																					
138STORAGE GUIDELINES	<p>The coating should be stored in a dark dry place at a temperature between 5°C and 25°C. The shelf life of styrene dissolved vinyl ester resins, nominally 6 months, will be significantly reduced when exposed to light.</p>																					
PHYSICAL PROPERTIES OF SG-543 GLASS FLAKE REINFORCED COATING	<table border="1"><thead><tr><th>Characteristic</th><th>Standard</th><th>Test Data</th></tr></thead><tbody><tr><td>Abrasion Resistance</td><td>ASTM 4060</td><td>0.035 G/m</td></tr><tr><td>Adhesion Properties</td><td>ASTM D952</td><td>8 MPA</td></tr><tr><td>Salt Water Resistance</td><td>ASTM B117</td><td>20,000 hrs No Effect</td></tr><tr><td>Cathodic Disbondment</td><td>BS 3900F11</td><td>Compatible</td></tr><tr><td>Tensile Strength</td><td>ISO-572-2</td><td>95 MPa</td></tr><tr><td>Flexural Strength</td><td>ISO-572-2</td><td>150 MPa</td></tr></tbody></table>	Characteristic	Standard	Test Data	Abrasion Resistance	ASTM 4060	0.035 G/m	Adhesion Properties	ASTM D952	8 MPA	Salt Water Resistance	ASTM B117	20,000 hrs No Effect	Cathodic Disbondment	BS 3900F11	Compatible	Tensile Strength	ISO-572-2	95 MPa	Flexural Strength	ISO-572-2	150 MPa
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CURE TIMES 15°C	Touch dry approx. 2.5 hrs. Full chemical cure 2-7 days.																					
OVERCOATING TIME	Minimum 6 hrs – maximum 3 days																					
UNIT SIZE	20 ltr tin (24 kg) Theoretical coverage 0.83 sqm/kg at 1 mm dft																					

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SURFACE PREPARATION	Where necessary dress weld seams and sharp edges. Components which have been subject to sea water corrosion damage will require testing for soluble salts and a washing cycle. Abrasive blast clean to Swedish Standard SA2.5 (ISO 8501-1:2007) with a minimum surface profile of 75-100 microns. (See Sprayglass Surface preparation Document Ref. SG20).
APPLICATION CONDITIONS	Application temperature should be between 10°C & 20°C with a maximum RH of 90%. The substrate temperature should be no lower than is 5°C and a minimum of 3°C above dew point.
VENTILATION / LIGHTING	Do not use in a confined space without adequate ventilation or breathing equipment. Use only EEx em II T3 Zone 1 lighting and indirect fan blowers within an enclosed environment.
FLASH POINT	31°C
APPLICATION EQUIPMENT	Trowel, spatula or stiff brush, short-knapped roller.
POT LIFE	40 – 60 minutes
APPLICATION PROCESS	<p>The flake filled material should be applied by trowel or brush in two or more coats, each coat being 1000 to 1100 microns thick. The first or intermediate coat should be slightly pigmented to provide a colour contrast. Regular checks should be carried out with a wet film gauge to ensure uniform application of each coat.</p> <p>Plate edges, corners, and weld margins should be stripe coated using Sprayglass 443 by brush prior to application of the first coat and again before the application of the finish coat. This will help to ensure adequate coverage of these critical areas.</p> <p>The uncatalysed material must be mixed thoroughly using a mechanical whip. The material should then be catalysed according to quantity and ambient conditions. As a general rule use 1 to 2% catalyst when applying at temperatures between 10°C and 20°C. Ensure the two components are fully mixed using a mechanical whip prior to application</p> <p>Apply the material to the primed substrate by trowel to the required thickness. Using a short-knapped mohair roller moistened with styrene roll the surface of the material using medium pressure. This will remove any entrapped air and proved a smoother surface finish.</p> <p>If a waxed topcoat is being applied then this must only be applied when all testing and examination works have taken place. (See Sprayglass Doc.Ref.SG24)</p> <p>Note: Use of less than 1% catalyst will not produce a full cure of the coating material. Inadequate mixing will lead to areas of unsatisfactory cure.</p> <p>Pay particular attention to the stated pot life of the materials (see materials package labelling). Clean down tools and equipment with acetone within the specified time. Great care must be taken to avoid contaminating the coating materials with acetone as this can have adverse effects on the cure of the materials.</p> <p>The dry film thickness of the completed coating should be measured with a suitably calibrated electronic instrument. The lining should be examined for consistency of finish, lack of sags, runs, misses etc, particularly at inaccessible areas of the work. Spark testing using a high frequency AC unit with voltage set at 500 volts per 25 microns (20 KV per 1mm) The degree of cure may be determined by a Barcol Colman Hardness Impressor. A reading of 30 to 40 is acceptable.</p>
INSPECTION & TESTING	