# Sprayglass SG-743

## GRP Laminate Liner

PRODUCT DESCRIPTION

Sprayglass SG-743 is a heavy duty 3 component lining formulated from a Bisphenol A Epoxy Vinyl Ester Resin reinforced with woven glass cloth. The lining is applied, by trowel and hand lay up to a suitably prepared concrete substrate. (See Sprayglass Surface Preparation Document Ref. SG21)

LAMINATE MAKE UP

- Sprayglass LP Primer.
- A Silica filled base coat approx. 1.5 mm thick
- One layer of woven glass cloth impregnated with the Sprayglass 643 resin
- A Silica filled top coat approx. 1.5 mm thick
- Nominal thickness of finished laminate 3.5 – 4.0 mm.

SUGGESTED USES

SPRAYGLASS SG-743 is used primarily to protect concrete bunds and floors subject to chemical spillage. The integral structural strength that this monolithic system offers makes it ideal for the protection of sound concrete substrates. Sprayglass SG-743 is widely used in the power generation, chemical process and oil related industries.

PRINCIPAL CHARACTERISTICS

- Excellent corrosion resistance
- Superior physical properties
- Good erosion / abrasion resistance
- Broad chemical resistance
- Good application properties
- Good repair ability
- Monolithic seamless structure
- Will bridge live cracks

CHEMICAL & TEMPERATURE RESISTANCE

SPRAYGLASS 743 resin is resistant to corrosive mineral acids, alkalis, salts and organic solvents. Suitable for operating temperatures between -15$^{O}$C and 75$^{O}$ dependant on operational chemical environment. Formulated from a Bisphenol A epoxy vinyl ester resin it demonstrates excellent retention of the laminate properties. Refer to Sprayglass International Ltd for information on specific chemical environments.

STORAGE GUIDELINES

Sprayglass 743 resin should be stored in a dark dry place at a temperature between 5$^{O}$C and 25$^{O}$C. The 6 month shelf life of styrene dissolved vinyl ester resins will be significantly reduced when exposed to light.

PROPERTIES OF CURED SPRAYGLASS 743 RESIN

| Characteristic | Standard | Result |
|---|---|---|
| Tensile Strength | ISO 527-2 | 138 MPa |
| Mod. of elasticity in tension | ISO 527-2 | 10 GPa |
| Flexural Strength | ISO 527-2 | 210 MPa |
| Mod. of elasticity in bending | ISO 178 | 10 GPa |

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|---|---|
| SURFACE PREPARATION | The Sprayglass SG-743 System should be applied to a suitably prepared and primed substrate. Concrete should clean and dry with any surface laitance removed either by grit blast, acid etch or scabbling. (See Sprayglass Surface Preparation Document Ref. SG20<br><br>Prepare substrate should be primed with a single coat of Sprayglass LP Primer to a nominal dft of 50 microns. |
| APPLICATION CONDITIONS | Application temperature should be between 5$^{O}$C & 25$^{O}$C with a maximum RH of 90%. The substrate temperature should be no lower than is 5$^{O}$C and a minimum of 3$^{O}$C above dew point. |
| VENTILATION / LIGHTING | Do not use in a confined space without adequate ventilation or breathing equipment.<br>Use only EEx em ll T3 Zone 1 lighting and indirect fan blowers within an enclosed environment. |
| FLASH POINT (RESIN) | 31$^{O}$C |
| APPLICATION EQUIPMENT | A combination of Trowel, Roller & Paddle Roller. |
| POT LIFE | Once mixed 15 – 20 minutes |
| APPLICATION OF BASE FILLER COAT | Thoroughly mix the un-catalysed Sprayglass 743 resin using a mechanical whip. Catalyse according to quantity and ambient conditions using a medium reactivity peroxide based catalyst. As a general rule 1% to 2% catalyst for ambient temperatures between 10$^{O}$C & 20$^{O}$C. Mix the two components using a mechanical whip.<br><br>**A Catalyst ration of less than 1% will not produce a full cure of the coating material. Inadequate mixing will result in areas of inadequate cure.**<br><br>Add the RB Filler powder to the catalysed resin in a 2:1 filler/resin ratio. Fully blend in the filler powder with a mechanical whip. Never mix more material than can be applied within the stated pot life. The filler/resin ratio may vary slightly with temperature. Under no circumstances should the resin and filler be mixed together before the resin is catalysed.<br><br>The base should be trowel applied to the substrate using a plasterer's or notched trowel in strips approx. 1.2 metres wide at a nominal thickness of 1.5 mm. |
| APPLICATION OF LAMINATE | Cut strips of 280 gm woven glass mat. Strips should be approx. 50 mm smaller all round than the applied resin/filler base coat. Thoroughly mix the un-catalysed SG 743 resin using a mechanical whip. Catalyse according to quantity and ambient conditions. Apply the strip of woven mat directly to the base coat whilst the base coat is still wet and roll out with a metal ribbed (paddle) roller to ensure a good bond between the base coat and the laminate. Wet out the CSM with catalysed resin and roll out to expel any air entrapped between the mat and base coat. Adjacent strips of woven mat should overlap by 50 mm at each joint. |
| APPLICATION OF TOP FILLER COAT | Thoroughly mix the silica filled top coat as per the base coat in the same manner and proportions. Once the base coat / laminate has started to harden, but is still tacky, apply the top coat by using a plasterer's or notched trowel at a nominal thickness of 1.5 mm. Using a soft bristle brush (or short napped paint roller) dampened with Styrene, brush or roller out trowel marks.<br><br>(Do not use excessive amounts of styrene this may effect to cure of the lining system. |

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