

Sprayglass SG-459

Glass Flake Coating



Date of Issue: 01.06.2026

PRODUCT DESCRIPTION

Sprayglass SG-459 is a 2 component medium duty glass flake reinforced coating applied by airless spray, brush or roller. It is formulated from a Novolac Epoxy Vinyl Ester resin and normally applied to give a dry film thickness of 1 - 1.25 mm. Additional coats may be required to provide additional protection for more hazardous chemical environments or elevated temperatures.

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.

SUGGESTED USES

Sprayglass SG-459 is used primarily to protect steel from corrosive attack. It is widely used in the Power Generation, Chemical and Water Treatment Industry for lining Tanks, process vessels, filtration vessels, ion exchange vessels and Anaerobic Digesters. Within the Offshore Oil industry it is used for lining stacks, ducts, fume scrubbers, and fan casings.

PRINCIPAL CHARACTERISTICS

- Excellent corrosion resistance
- Very good abrasion resistance
- Very good erosion resistance
- Excellent chemical resistance
- Very low permeability
- High temperature tolerance
- Excellent undercutting resistance
- Very good application properties
- Excellent repair- ability
- Rapidity of cure

VOLUME SOLIDS

98%

CHEMICAL & TEMPERATURE RESISTANCE

Sprayglass SG-459 provides excellent thermal and chemical resistance against solvents, acids, and oxidising media such as chlorine. At 2mm dft it is can withstand total immersion temperatures up to 100°C and in gaseous environments temperatures up to 170°C, dependent upon the specific chemical environment.

STORAGE GUIDELINES

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.

PHYSICAL PROPERTIES OF SG-459 GLASS FLAKE REINFORCED COATING

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	111 MPa
Flexural Strength	ISO-572-2	208 MPa

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

Ref: SG459tds

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SURFACE PREPARATION	Where necessary remove weld spatter and dress weld seams and sharp edges. Abrasive blast clean to Swedish Standard SA2.5 (ISO 8501-1:2007) with a minimum surface profile of 50-75 microns. (See Sprayglass Surface Preparation Document Ref. SG20).
APPLICATION CONDITIONS	Application temperature should be between 5°C & 25°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	Airless spray unit 63:1 or 45:1. Tip size 0.025" - 0.031" (625 – 775 microns) Pressure at tip 2,500–3,500 psi (175 – 245 kg/cm ²) Application by brush or roller is recommended for small areas only.
POT LIFE	40 – 60 minutes
APPLICATION PROCESS	The flake filled material should be applied by airless spray or brush in two or more coats, each coat being 375 to 500 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. Plate edges, corners, and weld margins should be stripe coated 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 areas. 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. Use all Sprayglass materials directly after mixing. If a waxed topcoat is being applied then this must only be applied when all testing and examination works have taken place. (See Sprayglass Glass Flake Appl. Doc. Ref. SG24) 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. When applying by airless spray refer to equipment manufacturers operating procedures. In addition remove pump filters, surge pot, and in line filters. 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.
INSPECTION & TESTING	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.

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