

# SFG 75-90

## SPRINT™ TOUGHENED SURFACING FILM

- Protects underlying laminate
- Reduction in surface film-laminate interfacial voids
- Improved resistance to water ingress
- Suitable for post-painting

### INTRODUCTION

SFG 75-90 surfacing material is a light green, toughened, supported epoxy film designed to enhance the surface finish of moulded composite components. It allows a good surface finish to be obtained by vacuum-bag moulding processes. It can be used directly against a suitably release treated mould surface, with prepreg or SPRINT™ plies laid up behind it. When fully cured with SPRINT™ or prepreg, SFG 75-90 forms a stable, tough surface which can be sanded in preparation for painting.

## INSTRUCTIONS FOR USE

SFG 75-90 recommended vacuum bag processing guidelines are as follows:

1. Ensure SFG 75-90 surfacing material has attained ambient temperature (circa 18-23°C) before it is removed from its packaging to avoid condensation of water on the surface film whilst defrosting.
2. Apply a single layer of SFG 75-90 surfacing material to a suitably release treated mould surface. When applying directly to a mould, release agents suitable for epoxy resins should be used and tests should be performed by the user to ensure that satisfactory release is obtained.
3. The product is designed to be applied with the tacky side against the tool face. The material can be placed into the mould in any size/shape however it is important to keep overlaps to a minimum, butt joints are also suitable.
4. Once the mould surface has been covered and before the backing laminate has been added, air paths need to be introduced around the circumference of the part. Ensure that the surfacing film extends beyond the margin of the structural laminate such that the vacuum consumable stack can draw air directly from the perimeter of the surfacing film.
5. Apply SPRINT™ or prepreg layers behind the surface film (NOTE: significant improvements in surface stability due to voiding and component quality are obtained if SPRINT™ layers are used behind the surfacing film rather than prepreg).
6. Apply release film and breather suitable for the reinforcing laminate over the laminate stack. Cut and fit as necessary. Overlaps are acceptable. Consult SPRINT™ or prepreg datasheet for optimum bagging procedure.

## PRODUCT INFORMATION

### AVAILABILITY

SFG 75-90 surfacing material is currently available in 150g film weight.

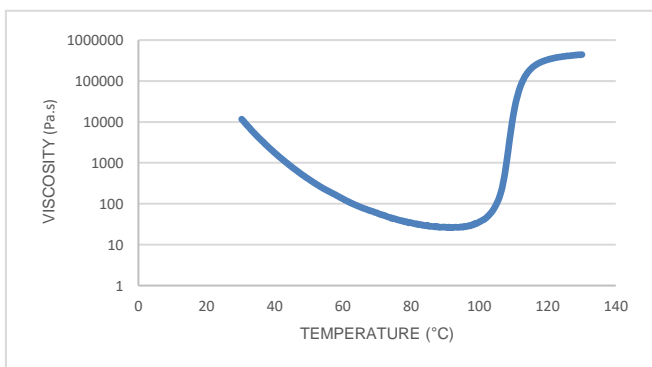
PROPERTY	VALUE	
Colour	Pale Green	
Tack	Medium	
Carrier	Glass	
Carrier Weight	2 x 70 g/m <sup>2</sup>	0.46 oz/ft <sup>2</sup>
Total Areal Weight	290 g/m <sup>2</sup>	0.95 oz/ft <sup>2</sup>

## FILM PROPERTIES

### RHEOLOGY DATA

SFG 75-90 resin viscosity profile conducted at 1°C (1.8°F) per minute.

PROPERTY	VALUE	
Minimum Viscosity	26Pa.s	260P
Temperature at Minimum Viscosity	92°C	198°F



### TRANSPORT & STORAGE

When stored sealed & out of direct sunlight.

STORAGE TEMP		UNIT	VALUE
-18°C	0°F	months	24
+18-22°C	64-72°F	days	5*

\*To retain optimum air breathing properties the film is best laid up and cured within 5 days. The rheological and reactivity time at +18-20°C is 8 weeks. However, this is reduced at higher temperature, at 30°C this will be 3 weeks.

To avoid condensation on the rolls allow it to reach room temperature before unwrapping.

All SPRINT™ materials should be stored in a freezer when not in use to maximise their useable life, since the low temperature reduces the reaction of resin and catalyst to virtually zero. At -18°C (0°F), the temperature of most freezers, some reaction will still occur. In most cases after some years, the material will become unworkable.

### HEALTH AND SAFETY

Please refer to product SDS for up to date information specific to this product.

## CURING SCHEDULE

### TYPICAL CURE PROFILES

The successful use of these cure schedules will depend on part size and laminate construction. Heat up rate and dwell periods need to be tailored to take consideration of oven capacity, thermal mass of tool, laminate construction etc. Data in the table below is based on laminate temperatures, air temperatures may need to be higher. It is recommended that Gurit Technical Support is contacted for further advice before utilising any of the suggested cure cycles.

### MINIMUM CURE TIME AND TEMPERATURE

PROPERTY	70°C	80°C	120°C	TEST STANDARD
Processing Method	Vacuum Bag			
Typical Ramp Rate	0.3°C (0.5°F) to 2°C per minute	0.3°C (0.5°F) to 2°C per minute	0.3°C (0.5°F) to 2°C per minute	
Cure Dwell Time	12 hours	6 hours	45 mins TBC	
Cure Pressure	-1 (bar)			
Dry T <sub>g1</sub> (DMA)	77°C	92°C	93°C	ASTM D7028

## CURED RESIN PROPERTIES

Using vacuum pressure / oven only cure with standard processing techniques.

PROPERTY	12 HOURS @ 70°C		6 HOURS @ 80°C		45 Minutes at 120°C		TEST STANDARD
Cured ply thickness	0.2-0.3mm	0.008"	0.2-0.3mm	0.008"	0.2-0.3mm	0.008"	ISO 6721
Taber Abrasion Loss	20mg	0.0007 oz	19mg	0.00067 oz	13mg	0.0005oz	ASTM D4060 with test wheel CS10 @ 500 Cycles @ 90% Vacuum
Taber Abrasion Wear Index	40	-	40	-	29	-	ASTM D4060 with test wheel CS10 @ 1000 Cycles @ 90% Vacuum
Shore D Hardness	82.5	-	81.5	-	82.9	-	ASTM D2240

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## TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

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## 24-HOUR CHEMICAL EMERGENCY NUMBER

For advice on chemical emergencies, spillages, fires or exposures:

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