

SF 75-90

SPRINT™ SANDABLE SURFACING FILM

- ▮ Easy to sand, improved surface for painting
- ▮ Effective print-through barrier
- ▮ Reduction in surface film-laminate interfacial voids
- ▮ Stable surface up to 115°C (239°F)
- ▮ Protects underlying laminate

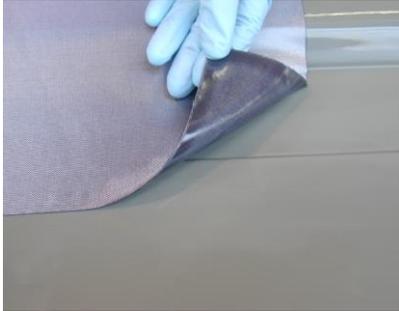
INTRODUCTION

The SF75-90 surfacing material is a grey filled, sand-able epoxy film designed to enhance the surface finish of moulded composite components. It allows a paintable 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, SF 75-90 forms a stable sand-able surface which, once lightly sanded to provide a key for painting, reduces print-through of the underlying laminate. The epoxy system is supplied ready impregnated into a supporting medium and ready catalysed, requiring only a low to moderate temperature cure.

INSTRUCTIONS FOR USE

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

1. Ensure SF 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 SF 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 as shown. 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

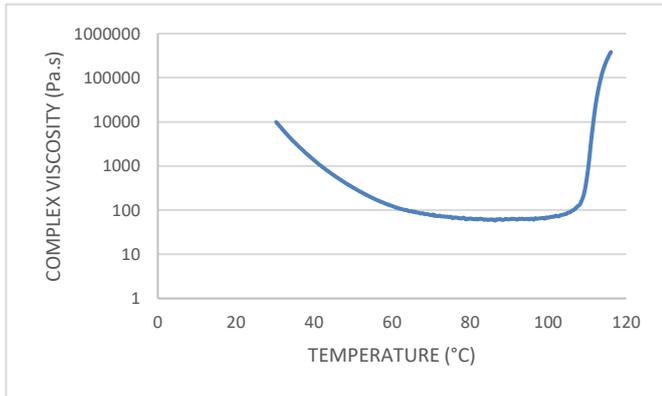
PROPERTY	SF75-90/S2/300g/1260mm
Colour	Dark Grey
Tack	Medium
Carrier Type	Glass
Resin Film Weight	300 g/m ²
Carrier Weight	2 x 70 g/m ²
Total Areal Weight	440 g/m ²
Thickness (uncured)	0.28mm

PREPREG PROPERTIES

RHEOLOGY DATA

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

PROPERTY	VALUE	
Minimum Viscosity	58 Pa.s	75-902 P
Temperature at Minimum Viscosity	86°C	215°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. However, the resin matrix will cure satisfactorily at up to 8 weeks at room temperature.

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. However, even 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.

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

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.

TYPICAL CURE SCHEDULES

PROPERTY	70°C CURE SCHEDULE	80° CURE SCHEDULE	120°C CURE SCHEDULE
Processing Method	Vacuum Bag / Autoclave	Vacuum Bag / Autoclave	Vacuum Bag / Autoclave
Typical Ramp Rate	0.3°C per minute to 2°C per minute	0.3°C per minute to 2°C per minute	0.3°C per minute to 2°C per minute
Cure Time	12 hours	6 hours	45 minutes
Cure Pressure	-1 Bar / +6 Bar	-1 Bar / +6 Bar	-1 Bar / +6 Bar

CURED RESIN PROPERTIES

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

PROPERTY	SYMBOL	70°C CURE		TEST STANDARD
Cured ply thickness	t_{ply}	0.2-0.3 mm	0.008-0.012 in	ISO 6721
Taber Abrasion Resistance	L	20 mg	0.00007 oz	ASTM D4060 with test wheel CS10 @ 500 Cycles @ 90% Vacuum
Taber abrasion Wear Index	-	54.1	54.1	ASTM D4060 with test wheel CS10 @ 1000 Cycles @ 90% Vacuum
Shore D Hardness	S_D	50		ASTM D2240
Tg1 DMTA	T_{g1}	87°C	188°F	ISO 6721 (DMA)

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (the Company) only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at Gurit's Website: www.gurit.com/terms-and-conditions.aspx

The Company strongly recommends that Customers make test panels in the final process conditions and conduct appropriate testing of any goods or materials supplied by the Company prior to final use to ensure that they are suitable for the Customer's planned application. Such testing should include testing under conditions as close as possible to those to which the final component may be subjected. The Company specifically excludes any warranty of fitness for purpose of the goods other than as set out in writing by the Company. Due to the varied nature of end-use applications, the Company does, in particular, not warrant that the test panels in the final process conditions and/or the final component pass any fire standards.

The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

Telephone + 44 1983 828000 (08:30 – 17:00 GMT)
Email technical.support@gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

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

Europe +44 1273 289451
Americas +1 646 844 7309
APAC +65 3158 1412

All trademarks used or mentioned in this document are protected by law.

E customer.support@gurit.com

W www.gurit.com