



SFX740

Epoxy Surfacing Film Range

Introduction

SFX740 is a range of epoxy surfacing films delivering outstanding, low-defect surface quality straight out of the mould, with lightning strike protection and weight-optimised suppression of fibre print-through. It is engineered for out-of-autoclave processing with low temperature cure options, reducing or eliminating the need to prime or finish-paint components. The film can be pigmented, typically grey or black, to suit the finished component.

Tailored surface tack makes placement in the mould simple and robust, and the base chemistry is formulated so all three variants co-cure with SHD's VTC and MTC epoxy prepreg systems.

The range comprises three variants:

- **SFX740-LS:** integrated copper mesh for single-step lightning strike protection
- **SFX740-LW:** mass-optimised for weight-critical structures
- **SFX740-HF:** high-build fibre print-through suppression for demanding cosmetic finishes

Typical applications: *Aerospace & advanced air mobility structures – Motorsport bodywork – High-cosmetic painted composites*

Key Features & Benefits

- Out-of-autoclave processing with **low temperature cure** options
- Co-curable with SHD **VTC and MTC** epoxy prepreg systems
- Work life at 20°C: **21 days**
- Storage life at -18°C: **18 months**
- Excellent surface finish, minimising or eliminating post-mould preparation
- Tailored surface tack for simple, robust mould placement
- Very low VOC content – no added solvents during manufacture



Storage & Out Life

This material should be kept frozen at -18°C (0F). It must be kept sealed in a polythene bag which must not be opened until fully thawed to room temperature. If the material is not fully used, then the material must be resealed in the polythene bag to prevent moisture absorption.

Important Note:

If bags are opened before the material is fully thawed, condensation may form and affect surface tack and cosmetic finish. Allow the material to reach room temperature inside its sealed bag before opening.

Cure Cycle Options

- Recommended cure:

Temperature	Duration	Tg
65°C (minimum)	16 hours	75°C
80°C	5 hours	90°C
100°C	1 hour	110°C
120°C (maximum)	45 minutes	130°C

- Co-cure with SHD VTC / MTC prepreg systems: follow the cure schedule of the co-cured prepreg

Note: other cure options are available according to service needs. Contact SHD technical for further information

Important Note:

Curing schedule is meant to be a guide only and is subject to local conditions. To avoid exotherm, particular care must be taken with thick laminates. Ramp rates must not exceed 3.0°C/min during initial cure and 0.3°C/min during post cure (free-standing).

Cured Material Properties

Physical & Surface Properties

Property	SFX740-LS	SFX740-LW	SFX740-HF
Colour	White/Grey / black	White/Grey / black	White/Grey / black
Areal weight PPW	495 g/m ²	250 g/m ²	400 g/m ²
Nominal cured thickness	0.30mm [.012"]	0.13mm [.005"]	0.25mm [.010"]
Integrated conductive layer	Cu mesh, [145] gsm	N/A	N/A
Tack / drape	[EXCELLENT]	[EXCELLENT]	[EXCELLENT]



Layup & Bagging Considerations

The film side where the majority of resin is closest to the surface should be placed against the tool during layup. For SFX740-LS, the copper mesh side should be oriented per the applicable processing guide to maintain lightning strike continuity.

Surface films attain best results with high vacuum and excellent access of the material to the vacuum paths to maximize tool side breathing and reverse side breathing potential. Similar to all good industry established practices when processing out-of-autoclave prepreg formats, best results are attained if surface plies are cut 2-3 mm (1/8") larger than the other prepreg plies and have a connection to the vacuum path. Contact SHD for specific advice.

Health and Safety

This material contains epoxy resin, which can cause allergic reactions with skin contact. Repeated or prolonged skin contact must be avoided. Please refer to the product Safety Data Sheet before using this material. The following precautions must be taken when using epoxy surfacing films:

- Overalls must be worn.
- Impervious gloves must be worn.
- Curing schedule is meant to be as a guide only and is subject to local conditions.
- To avoid exotherm, particular care must be taken with thick laminates.
- Ramp rates must not exceed 3.0°C/min during initial cure and 0.3°C/min during post cure.

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Customers must carry out their own tests and assessments as necessary in order to determine the quality and suitability of the product for their particular application and circumstances. Such testing should be performed under conditions identical to those to which the final component/product may be subjected. Values listed in any SHD document are for typical properties of the product or substance in question and are not intended to be used in establishing either statistical specifications nor engineering basis values. They do not constitute either minimum or maximum values for the product or substance in question.