

LIGHTNING STRIKE PROTECTION FABRICS (LSPF)

First developed in the 1980's TPI has designed, woven and supplied the composite industry a variety of lightning strike reinforcement fabrics. These specialty fabrics have been incorporated in business jets, commercial passenger aircraft and military aircraft.

These unique fabrics are a woven hybrid, incorporating a structural reinforcement yarn such as carbon fiber woven with a metallic wire, chosen to meet a required conductivity. The fabric is easy to combine into the surface ply of a composite layup and serves dual purposes as structural layer and conductive surface layer.

UNIQUE ATTRIBUTES:

Design

Custom designed for weight and conductivity.

Can be engineered to meet both structural and conductive requirements.

Structural yarns and conductive wires are interwoven as one fabric, for potential weight advantage.

Multiple yarn systems such as carbon, glass, and aramid along with multiply conductive wires such as copper, aluminum, bronze, nickel, monel.

Production

Can be pre-preg using standard established equipment.

Exceptional cutting and handleability during kitting or lay-up.

Easy to mold than expanded metal.

Easy to combine into the surface ply of a composite lay-up.

Superior surface finish.



LIGHTNING STRIKE PROTECTION

STYLE #	WARP FIBER	YARN COUNT	CARBON	WIRE	TOTAL	THICKNESS	WEAVE STYLE	WIDTH
Style #4607	AS4-3K/Alum. Wire	11.5x11.5	196 g/m ²	18 g/m ²	214 g/m ²	.014"	Plain Weave	42" Wide
Style #4607PB	AS4 3K/Phos. Bronze Wire	11.5x11.5	196 g/m ²	64 g/m ²	260 g/m ²	.014"	Plain Weave	42" Wide
Style #4608	T650-35-3K/Alum. Wire	12.5x12.5	200 g/m ²	18 g/m ²	218 g/m ²	.014"	Plain Weave	42" Wide
Style #4609	T300 3K/Alum. Wire	24x23	365 g/m ²	36 g/m ²	401 g/m ²	.012"	Plain Weave	42" Wide
Style #4620	IM7 6K/Alum. Wire	21/8x21C/8W	370 g/m ²	13 g/m ²	383 g/m ²	.027"	Plain Weave	42" Wide
Style #4816	T800 6K/Phos Bronze Wire	11x11	196 g/m ²	64 g/m ²	260 g/m ²	.014"	Plain Weave	42" Wide
Style #4923-B	IM7-6K/Bronze Wire	11.6x11.4	203 g/m ²	64 g/m ²	267 g/m ²	.015"	Plain Weave	39" Wide
Style #4923-C	IM7-6K/Copper Wire	11.6x11.4	203 g/m ²	63 g/m ²	266 g/m ²	.015"	Plain Weave	39" Wide

