



LR1406 Ablative Prepreg

LR1406 is a new generation composite produced from Lewcott PSR133G carbon filled MIL-R-9299 phenolic resin matrix on a specifically designed five harness (5HS) PAN precursor carbon fabric. This product offers reduced thermal conductivity versus other PAN carbon reinforced materials, and improved erosion resistance versus rayon-based fabric reinforced materials. The material is designed to meet and/or exceed the thermal and insulation requirements of solid propulsion rockets. LR1406 is available as Broadgoods, Molding Compound and Straight or Bias Tape.

Chemical Properties of LR1406

Property	Value	Test Method
Resin Solids, %	31-37	QCP-R-8
Volatile, %	3-7	QCP-V-1
Laminar Flow @ 150 psi, %	10-20	QCP-F-2
Filler Content, %	8-15	QCP-R-5
Uncured Thickness, x10 ⁻³ in.	0.022	QCP-T-2
Prepreg Width, in	36 to 60	

Physical Properties of LR1406

Property	Value	Test Method
Specific Gravity	1.44	ASTM-D-792
Tensile Strength, psi	20,000	ASTM-D-638
Tensile Modulus, msi	3.5	ASTM-D-638
Tensile Elongation, %	0.5	ASTM-D-638
Flexural Strength, psi	30,000	ASTM-D-790
Flexural Modulus, msi	3.0	ASTM-D-790
Compression Strength, psi	25,000	ASTM-D-695
Thermal Conductivity (across ply), BTU/ft.-hr.-°F	0.35	ASTM-C-177

Molding Cycle

Press cured at 325° F using 1000 psi pressure for 2 hours.