



LR2103 MC Ablative Prepreg

LR2103 MC is a molding compound produced from a MIL-R-9299 phenolic resin matrix on a 9 osy 8 HS fiberglass fabric. The material is designed to meet and/or exceed the thermal and insulation requirements of the solid propulsion rockets.

Chemical Properties of LR2103 MC

Property	Value	Test Method
Resin Solids, %	34-40	QCP-R-8
Volatile, %	1-4	QCP-V-1
Flow @ 150 psi, %	5-25	QCP-F-2
Bulk Factor	5-7	ASTM-D-1895

Physical Properties of LR2103 MC

Property	Value	Test Method
Specific Gravity	1.86	ASTM-D-792
Tensile Strength, psi	12,500	ASTM-D-651
Tensile Modulus, msi	2.4	ASTM-D-651
Flexural Strength, psi	20,000	ASTM-D-790
Flexural Modulus, msi	2.3	ASTM-D-790
Compression Strength, psi	40,000	ASTM-D-695
Mold Shrinkage, in./in.	0.0005	ASTM-D-955
Thermal Conductivity (with ply), BTU/ft.-hr.-°F	0.16	ASTM-C-177
Specific Heat @ 150°F, BTU/lb. °F	0.23	ASTM-C-351
CTE (normal to pressure)(80-500 °F), 10 ⁻⁶ in./in./°F	8	ASTM-D-696

Molding Cycle

Specimens were cured at 325° F using 1000 psi pressure for 30 minutes.