

Metton LMR M1539 Liquid Molding Resin

Category : Polymer , Thermoset , Polydicyclopentadiene (PDCPD)

Material Notes:

Metton LMR is a tough and durable engineering plastic material used to produce large or thick molded parts for many diversified applications. The Metton LMR reaction injection molding process can provide large parts in low pressure molds with the mechanical property performance similar to injection molded engineering thermoplastics. The combination of Metton LMR's process and material capabilities result in a new design freedom for replacing traditional materials such as metal, wood and fiberglass. Injection molded engineering thermoplastics have a similar benefit package for smaller parts. Small parts for Metton LMR are in the 8 to 10 ft² (1 m²) range which is the upper end for cost and size capability for standard injection molding. In addition, Metton LMR parts do not require identical part geometry for multi-cavity molds. Metton LMR is a family of lightly cross linked olefinic thermoset polymers based on polydicyclopentadiene (PDCPD) with mechanical property performance attributes similar to engineering thermoplastics. In the Metton LMR molding process, two low - viscosity DCPD liquid streams - one containing an activator (A Component) and the other a catalyst (B Component) - are impingement mixed at a 1:1 ratio and injected at near room temperature into a closed mold. The resulting exothermic reaction (heat generating) creates a fully polymerized part in less than 60 seconds. Button to button cycle times are generally 4 to 6 minutes depending upon size and geometry

Order this product through the following link:

http://www.lookpolymers.com/polymer_Metton-LMR-M1539-Liquid-Molding-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792
Linear Mold Shrinkage	0.0070 cm/cm	0.0070 in/in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	44.8 MPa	6500 psi	ASTM D638
Elongation at Yield	4.0 %	4.0 %	ASTM D638
Tensile Modulus	1.98 GPa	287 ksi	ASTM D638
Flexural Yield Strength	74.5 MPa	10800 psi	5% strain; ASTM D790
Flexural Modulus	2.01 GPa	292 ksi	ASTM D790
Poissons Ratio	0.39	0.39	
Shear Modulus	0.712 GPa	103 ksi	Calculated
Izod Impact, Notched	4.00 J/cm	7.49 ft-lb/in	ASTM D256
	0.534 J/cm	1.00 ft-lb/in	
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	105 Â°C @Thickness 3.17 mm	221 Â°F @Thickness 0.125 in	ASTM D648
Flammability, UL94	V-0 @Thickness 3.17 mm	V-0 @Thickness 0.125 in	

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