

## Metton LMR M1534 Liquid Molding Resin

Category : Polymer , Thermoset , Polydicyclopentadiene (PDCPD)

### Material Notes:

Different product numbers represent different formulations for customer specific needs such as liquid freezing point. 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 ft<sup>2</sup> (1 m<sup>2</sup>) 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-M1534-Liquid-Molding-Resin.php](http://www.lookpolymers.com/polymer_Metton-LMR-M1534-Liquid-Molding-Resin.php)

Physical Properties	Metric	English	Comments
Density	1.034 g/cc	0.03736 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.12 %	0.12 %	24 hrs; ASTM D570
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114	114	ASTM D785
Tensile Strength, Yield	46.8 MPa	6790 psi	ASTM D638
Elongation at Yield	4.7 %	4.7 %	ASTM D638
Tensile Modulus	1.90 GPa	276 ksi	ASTM D638
Flexural Yield Strength	70.0 MPa	10200 psi	5% strain; ASTM D790
Flexural Modulus	1.88 GPa	273 ksi	ASTM D790
Compressive Yield Strength	58.4 MPa	8470 psi	ASTM D695
Poissons Ratio	0.39	0.39	
Shear Modulus	0.683 GPa	99.1 ksi	Calculated
Shear Strength			ASTM D732

Mechanical Properties	49.5 MPa Metric	7180 psi English	Comments
Izod Impact, Notched	4.60 J/cm	8.62 ft-lb/in	ASTM D256
	1.06 J/cm	1.99 ft-lb/in	
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear	87.8 Âµm/m-Â°C	48.8 Âµin/in-Â°F	ASTM E831
	@Temperature 0.000 - 50.0 Â°C	@Temperature 32.0 - 122 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	108 Â°C	226 Â°F	ASTM D648
	@Thickness 3.17 mm	@Thickness 0.125 in	
Glass Transition Temp, Tg	>= 138 Â°C	>= 280 Â°F	DMA
Flammability, UL94	HB	HB	
	@Thickness 5.50 mm	@Thickness 0.217 in	

## Contact Songhan Plastic Technology Co.,Ltd.

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