



# MATERIALS DATA SHEET

787 Renaissance Parkway | Painesville, OH 44077



## Material Series: MB5000

### SERIES DESCRIPTION & APPLICATION

MB5000 is a highly engineered energy absorption thermoset composite bulk molding compound. This material was designed to have elevated impact strength and dynatup energy absorption values for electrical equipment experiencing high energy interrupts. Rated UL 94 V0 @1.5mm. UL file number **E80533**

General Material Properties			
Property (Test Method)	Value		Units
Specific Gravity (ASTM D792)	1.77-1.87		
Mold Shrinkage (ASTM D955)	0.0015-0.0035		in/in
Water Absorption (ASTM D570)	<0.25		%
Barcol Hardness (ASTM D2583)	40-60		Barcol Units
Mechanical Material Properties (Cut Bars)			
Property (Test Method)	Value (US)	Value (Metric)	Units
Tensile Strength (ASTM D638)	3,000-5,000	20-35	psi (MPa)
Tensile Modulus (ASTM D638)	1.9-2.1 x 10 <sup>6</sup>	13.1-14.5	psi (GPa)
Flexural Strength (ASTM D790)	11,500-16,000	80-110	psi (MPa)
Flexural Modulus (ASTM D790)	0.80-0.95 x 10 <sup>6</sup>	5.5-6.5	psi (GPa)
Notched Izod Impact (ASTM D256)	11-16	580-850	ft-lb/in (J/m)
Mechanical Material Properties (Net Shape Molded Coupons)			
Property (Test Method)	Value (US)	Value (Metric)	Units
Tensile Strength (ASTM D638)	10,500-14,500	70-100	psi (MPa)
Tensile Modulus (ASTM D638)	2.2-2.4 x 10 <sup>6</sup>	15.1-16.5	psi (GPa)
Flexural Strength (ASTM D790)	23,000-28,000	160-190	psi (MPa)
Flexural Modulus (ASTM D790)	1.3-1.4 x 10 <sup>6</sup>	8.9-9.6	psi (GPa)
Notched Izod Impact (ASTM D256)	14-16	750-850	ft-lb/in (J/m)
Thermal and Electrical Material Properties			
Property (Test Method)	Value (US)	Value (Metric)	Units
Flammability (UL 94 V0)	.06	1.5	in (mm)
Heat Deflection Temperature (ASTM D648)	>500	>260	°F (°C)
UL RTI Elec, Imp, Str (UL 746B)	130,130,130		°C
Dielectric Strength (ASTM D149)	460-510	18-20	Volts/mil (kV/mm)
Arc Track Resistance (ASTM D495)	>180		Seconds

All property values are based on test performed on standard ASTM test samples and according to standard ASTM test methods unless otherwise indicated. This information is offered solely for your consideration and is to be used as a guide only. No other warranty is implied.

### Contact Us:

#### CORPORATE HEADQUARTERS

10095 Queens Way Chagrin Falls, Ohio 44023-5495

(440) 543-7526 Fax: (440) 543-4691

[www.Altraset.com](http://www.Altraset.com)

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