

## Borealis MD441U Polypropylene Compound, Mineral Filled

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Mineral Reinforced

### Material Notes:

MD441U is a 40% mineral filled polypropylene compound intended for injection molding. This material has excellent balanced mechanical properties and a medium melt flow rate. Applications: air conditioning parts, heater housings, and under the bonnet components. Information provided by Borealis AG

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Borealis-MD441U-Polypropylene-Compound-Mineral-Filled.php](http://www.lookpolymers.com/polymer_Borealis-MD441U-Polypropylene-Compound-Mineral-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.22 g/cc	0.0441 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	Borealis Method; average process
Melt Flow	6.0 g/10 min	6.0 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	
	27 g/10 min	27 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 230 °C	@Load 11.0 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	90.0 MPa	13100 psi	358 N/30s; ISO 2039
Tensile Strength, Yield	32.0 MPa	4640 psi	50mm/min; ISO 527-2
Elongation at Yield	7.0 %	7.0 %	50mm/min; ISO 527-2
Tensile Modulus	3.80 GPa	551 ksi	1mm/min; ISO 527-2
Flexural Modulus	3.90 GPa	566 ksi	2mm/min; ISO 178
Charpy Impact Unnotched	1.10 J/cm <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.120 J/cm <sup>2</sup>	0.571 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	0.300 J/cm <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	132 °C	270 °F	ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	81.0 °C	178 °F	ISO 75-2
Vicat Softening Point	100 °C	212 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	156 °C	313 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 lb	

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 260 °C	428 - 500 °F	mass temperature
Feed Temperature	40.0 - 80.0 °C	104 - 176 °F	
Mold Temperature	40.0 - 80.0 °C	104 - 176 °F	
Injection Velocity	100 - 200 mm/sec	3.94 - 7.87 in/sec	
Hold Pressure	30.0 - 60.0 MPa	4350 - 8700 psi	

Descriptive Properties	Value	Comments
Back Pressure	low to medium	
Emission (µgC/g)	29	VDA 277
Fogging (mg)	0.35	100°C, 16h; DIN 75201
	0.947	100°C, 3h; DIN 75201
Screw Speed	low to medium	

## Contact Songhan Plastic Technology Co.,Ltd.

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