

## SABIC Innovative Plastics LNP THERMOTUF VC006 Super Tough PA 6/6

Category : Polymer , Thermoplastic , Nylon , Nylon 66

### Material Notes:

LNP\* THERMOTUF\* VC006 is a compound based on Super Tough Nylon 6/6 resin containing Carbon Fiber. Added features of this material include: High Impact.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-THERMOTUF-VC006-Super-Tough-PA-66.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOTUF-VC006-Super-Tough-PA-66.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.21 g/cc	1.21 g/cc	ASTM D792
Density	1.21 g/cc	0.0437 lb/in <sup>3</sup>	ASTM D792
Moisture Absorption	0.620 %	0.620 %	50% RH, 24 hrs; ASTM D570
	0.950 %	0.950 %	23 <sup>o</sup> C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0040 cm/cm	0.0010 - 0.0040 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0090 - 0.020 cm/cm	0.0090 - 0.020 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	193 MPa	28000 psi	5 mm/min; ISO 527
	197 MPa	28600 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	193 MPa	28000 psi	5 mm/min; ISO 527
	197 MPa	28600 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.9 %	2.9 %	Type I, 5 mm/min; ASTM D638
	2.9 %	2.9 %	5 mm/min; ISO 527
Elongation at Yield	2.9 %	2.9 %	Type I, 5 mm/min; ASTM D638
	2.9 %	2.9 %	5 mm/min; ISO 527
Tensile Modulus	19.34 GPa	2805 ksi	1 mm/min; ISO 527
	20.7 GPa	3000 ksi	50 mm/min; ASTM D638
Flexural Strength	284 MPa	41200 psi	ISO 178
	286 MPa	41500 psi	1.3 mm/min, 50 mm span; ASTM D790

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	29.3 MPa	42500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	15.3 GPa	2220 ksi	1.3 mm/min, 50 mm span; ASTM D790
	15.53 GPa	2252 ksi	2 mm/min; ISO 178
Izod Impact, Notched	2.07 J/cm	3.88 ft-lb/in	ASTM D256
Izod Impact, Unnotched	10.7 J/cm	20.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	20.0 kJ/m <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	74.0 kJ/m <sup>2</sup>	35.2 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
Dart Drop, Total Energy	32.0 J @Temperature 23.0 Â°C	23.6 ft-lb @Temperature 73.4 Â°F	ASTM D3763
Impact Test	7.00 J	5.16 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	34.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	18.9 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
CTE, linear, Transverse to Flow	102 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	56.7 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	258 Â°C	496 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	261 Â°C @Thickness 3.20 mm	502 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	240 Â°C	464 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	252 Â°C @Thickness 3.20 mm	486 Â°F @Thickness 0.126 in	unannealed; ASTM D648

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