

# LNPT™ THERMOTUF™ COMPOUND VX99810

PDX-V-99810

## DESCRIPTION

LNP THERMOTUF VX99810 compound is based on Super Tough Nylon resin containing 15% glass fiber. Added features of this grade include: Impact Modified, Easy Release.

GENERAL INFORMATION	
Features	Enhanced mold release, Impact resistant
Fillers	Glass Fiber
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 5 mm/min	74	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	69	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4.5	%	ASTM D638
Tensile Modulus, 50 mm/min	4660	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	3090	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	72	MPa	ISO 527
Tensile Stress, break, 5 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.5	%	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
Tensile Modulus, 1 mm/min	4410	MPa	ISO 527
Flexural Modulus, 2 mm/min	3240	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	709	J/m	ASTM D4812
Izod Impact, notched, 23°C	143	J/m	ASTM D256
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	13	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	238	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	204	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	230	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	184	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.177	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	1.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.7 – 0.9	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	1 – 3	%	ASTM D955
Density	1.17	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.9	%	ISO 62
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Melt Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	275 – 290	°C	
Rear - Zone 1 Temperature	260 – 270	°C	
Mold Temperature	95 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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