LNP™ THERMOTUF™ COMPOUND VX99809

PDX-V-99809

DESCRIPTION

LNP THERMOTUF VX99809 compound is based on Super Tough Nylon resin containing proprietary fillers. Added features of this grade include: Impact Modified, Easy Release.

GENERAL INFORMATION	
Features	Enhanced mold release, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
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 20240711

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	43	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	40	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	75.4	%	ASTM D638
Tensile Modulus, 50 mm/min	1980	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	1220	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	42	MPa	ISO 527
Tensile Stress, break, 5 mm/min	41	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.6	%	ISO 527
Tensile Strain, break, 5 mm/min	129	%	ISO 527
Tensile Modulus, 1 mm/min	1880	MPa	ISO 527
Flexural Modulus, 2 mm/min	1300	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	1330	J/m	ASTM D4812
Izod Impact, notched, 23°C	885	J/m	ASTM D256
Multiaxial Impact	49	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	145	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	82	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	178	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	49	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	100	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	47	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.084	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.92	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	2 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	2 – 3	%	ASTM D955
Density	1.08	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.9	%	ISO 62
INJECTION MOLDING (3)			
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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