LNP™ THERMOTUF™ Compound IX02582

PDX-I-02582
REGION AMERICAS

DESCRIPTION

LNP THERMOTUF IX02582 compound is based on Nylon 6/12 resin containing 40% glass fiber. Added features of this grade include: Impact Modified.

GENERAL INFORMATION	
Features	High stiffness/Strength, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 612 (Nylon 612)
Processing Techniques	Injection Molding

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

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	156	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Modulus, 50 mm/min	12120	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	233	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	235	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9700	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	157	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Tensile Modulus, 1 mm/min	11810	MPa	ISO 527
Flexural Stress	233	MPa	ISO 178
Flexural Modulus, 2 mm/min	9980	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	995	J/m	ASTM D4812
Izod Impact, notched, 23°C	158	J/m	ASTM D256
Multiaxial Impact	5	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	20	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	62	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	214	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	198	°C	ASTM D648
CTE, -30°C to 30°C, flow	3.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.5E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	196	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.41	-	ASTM D792
Density	1.41	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.16	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	1 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	270 – 275	°C	
Front - Zone 3 Temperature	270 – 280	°C	
Middle - Zone 2 Temperature	260 – 270	°C	
Rear - Zone 1 Temperature	255 – 265	°C	
Mold Temperature	65 – 95	°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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