LNP™ THERMOTUF™ COMPOUND VF1001S

VF-1001 HS

DESCRIPTION

LNP THERMOTUF VF1001S compound is based on Super Tough Nylon resin containing 5% glass fiber. Added features of this grade include: Heat Stabilized, Impact Modified.

GENERAL INFORMATION	
Features	Heat Stabilized, 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
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	56	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.4	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	9.3	%	ASTM D638
Tensile Modulus, 5 mm/min	3390	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2940	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	61	MPa	ISO 527
Tensile Stress, break, 5 mm/min	56	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.4	%	ISO 527
Tensile Strain, break, 5 mm/min	7.6	%	ISO 527
Tensile Modulus, 1 mm/min	3290	MPa	ISO 527
Flexural Stress	86	MPa	ISO 178
Flexural Modulus, 2 mm/min	2760	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	720	J/m	ASTM D4812
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Multiaxial Impact	11	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	8	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	41	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	249	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	198	°C	ASTM D648
CTE, -30°C to 30°C, flow	6.4E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	9.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	242	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	154	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.12	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.68	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Density	1.12	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	270 – 295	°C	
Front - Zone 3 Temperature	290 – 300	°C	
Middle - Zone 2 Temperature	270 – 280	°C	
Rear - Zone 1 Temperature	260 – 270	°C	
Mold Temperature	50 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	10 – 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.

DISCLAIMER