LNP™ THERMOTUF™ COMPOUND V1000SU

V-1000 HS UV

DESCRIPTION

LNP THERMOTUF V1000SU compound is based on unfilled Super Touch Nylon resin. Added features of this grade include: Impact Modified, Heat Stabilized, UV Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, Impact resistant, Weatherable/UV stable, 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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 5 mm/min	41	MPa	ISO 527
Tensile Stress, break, 5 mm/min	41	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	146.7	%	ISO 527
Tensile Strain, break, 5 mm/min	165	%	ISO 527
Tensile Modulus, 1 mm/min	1650	MPa	ISO 527
Flexural Stress	53	MPa	ISO 178
Flexural Modulus	1700	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	57.2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	84.5	%	ASTM D638
Tensile Modulus, 5 mm/min	1710	MPa	ASTM D638
Flexural Stress	55	MPa	ASTM D790
Flexural modulus	2060	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	27	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Multiaxial Impact	49	J	ISO 6603
Izod Impact, notched, 23°C	197	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	49	J	ASTM D3763
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	150	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	147	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	1.34E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.34E-04	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	192	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	193	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.35E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.33E-04	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.08	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1	%	ISO 62
Mold Shrinkage, flow, 24 hrs [2]	2.2	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	2.6	%	ISO 294
Specific Gravity	1.07	-	ASTM D792
Density	1.08	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.6	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	2.1 – 2.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	2.5 – 2.7	%	ASTM D955
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