

LNPT[™] THERMOCOMP[™] COMPOUND UF0067W

UF-1006 HW Z270

DESCRIPTION

LNP THERMOCOMP UF0067W compound is based on Polyphthalamide (PPA) resin containing 30% glass fiber. Added features of this grade include: Hot Water Moldable, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Non Cl/Br flame retardant, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyphthalamide (PPA)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, brk, Type I, 5 mm/min	143	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	10540	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	213	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10200	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	128	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.9	%	ISO 527
Tensile Modulus, 1 mm/min	11310	MPa	ISO 527
Flexural Stress	189	MPa	ISO 178
Flexural Modulus, 2 mm/min	9130	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	662	J/m	ASTM D4812
Izod Impact, notched, 23°C	64	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	32	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	5	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	299	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	281	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	2.34E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.04E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.11E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	277	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	125	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	50	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	125	°C	UL 746B
PHYSICAL ⁽¹⁾			
Density	1.45	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	1.2 – 1.5	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2 – 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	1.2 – 1.5	%	ISO 294
Density	1.45	g/cm ³	ISO 1183
ELECTRICAL ⁽¹⁾			
Dielectric Strength, in oil, 0.8 mm	29.7	kV/mm	ASTM D149
Relative Permittivity, 1 kHz	4.05	-	ASTM D150
Relative Permittivity, 1 MHz	3.82	-	ASTM D150
Dissipation Factor, 1 kHz	0.0115	-	ASTM D150
Dissipation Factor, 1 MHz	0.0128	-	ASTM D150
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E121562-101284114	-	-
UL Yellow Card Link 2	E207780-103093678	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥1	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	90 – 110	°C	
Drying Time	3 – 5	Hrs	
Melt Temperature	280 – 320	°C	
Nozzle Temperature	280 – 320	°C	
Front - Zone 3 Temperature	280 – 320	°C	
Middle - Zone 2 Temperature	280 – 320	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Mold Temperature	90 – 120	°C	
Back Pressure	1 – 5	MPa	
Screw Speed	30 – 100	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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) 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.
- (4) 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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