LNP™ THERMOCOMP™ Compound UF00ASW

UF-100-10 A HS HW

DESCRIPTION

LNP THERMOCOMP UF00ASW compound is based on Polyphthalamide (PPA) resin containing 50% glass fiber. Added features of this grade include: Heat Stabilized, Hot Water Moldable.

GENERAL INFORMATION	
Features	Heat Stabilized, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
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]			
Flexural Stress, yld, 1.3 mm/min, 50 mm span	335	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	337	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	17500	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	214	MPa	ISO 527
Tensile Stress, break, 5 mm/min	214	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.4	%	ISO 527
Tensile Strain, break, 5 mm/min	1.4	%	ISO 527
Tensile Modulus, 1 mm/min	19060	MPa	ISO 527
Flexural Stress	324	MPa	ISO 178
Flexural Modulus, 2 mm/min	17240	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	788	J/m	ASTM D4812
Izod Impact, notched, 23°C	91	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	297	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	285	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	2.4E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.3E-05	1/°C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	296	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	281	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.65	-	ASTM D792
Density	1.65	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.27	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.6 – 0.9	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.33	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Melt Temperature	320 – 350	°C	
Front - Zone 3 Temperature	325 – 330	°C	
Rear - Zone 1 Temperature	315 – 320	°C	
Mold Temperature	50 – 105	°C	
Back Pressure	0.2 – 0.5	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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