LNP™ THERMOCOMP™ Compound SF00A

SF-100-10

DESCRIPTION

LNP THERMOCOMP SF00A compound is based on Nylon 12 resin containing 50% glass fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 12 (Nylon 12)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Consumer	Home Appliances, Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	121	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	121	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.7	%	ASTM D638
Tensile Modulus, 50 mm/min	12800	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	217	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	217	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10984	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	113	MPa	ISO 527
Tensile Stress, break, 5 mm/min	113	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.5	%	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	12280	MPa	ISO 527
IMPACT [1]			
Izod Impact, unnotched, 23°C	833	J/m	ASTM D4812
Izod Impact, notched, 23°C	160	J/m	ASTM D256
Multiaxial Impact	16	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	1	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	176	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	166	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL [1]			
Density	1.48	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.8 – 1	%	ASTM D955
Density	1.48	g/cm³	ISO 1183
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	225 – 240	°C	
Front - Zone 3 Temperature	225 – 240	°C	
Middle - Zone 2 Temperature	220 – 230	°C	
Rear - Zone 1 Temperature	215 – 225	°C	
Mold Temperature	70 – 80	°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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