LNP™ THERMOCOMP™ Compound QF00A

QF-100-10
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP QF00A compound is based on Nylon 6/10 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 610 (Nylon 610)
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 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	181	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	181	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 50 mm/min	18680	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	280	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	285	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	11440	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	181	MPa	ISO 527
Tensile Stress, break, 5 mm/min	181	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.3	%	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	15510	MPa	ISO 527
Flexural Modulus, 2 mm/min	12870	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	1305	J/m	ASTM D4812
Izod Impact, notched, 23°C	160	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	75	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	221	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	213	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	220	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.6	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.21	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.18 – 0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.5 – 1.5	%	ASTM D955
Density	1.6	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	270 – 275	°C	
Front - Zone 3 Temperature	270 – 280	°C	
Middle - Zone 2 Temperature	260 – 270	°C	
Rear - Zone 1 Temperature	250 – 260	°C	
Mold Temperature	80 – 95	°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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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