LNP™ THERMOCOMP™ Compound IF004

IF-1004
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP IF004 compound is based on Nylon 6/12 resin containing 20% 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 612 (Nylon 612)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component, Water Management
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	118	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Modulus, 5 mm/min	6830	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	184	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6080	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	119	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	6790	MPa	ISO 527
Flexural Stress	173	MPa	ISO 178
Flexural Modulus, 2 mm/min	5720	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	447	J/m	ASTM D4812
Izod Impact, notched, 23°C	63	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	27	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	213	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	196	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	4.E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.01E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	209	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	188	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.22	-	ASTM D792
Density	1.22	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.21	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
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	255 – 265	°C	
Mold Temperature	65 – 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.

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