LNP™ THERMOCOMP™ Compound GF003

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound GF-1003

Product reorder name: GF003

LNP THERMOCOMP™ GF003 is a compound based on Polysulfone resin containing 15% Glass Fiber.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	870	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.9	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.1	%	ASTM D 638
Tensile Modulus, 50 mm/min	55900	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1480	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	48100	kgf/cm²	ASTM D 790
Tensile Stress, break, 5 mm/min	86	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.8	%	ISO 527
Tensile Strain, break, 5 mm/min	3.1	%	ISO 527
Tensile Modulus, 1 mm/min	5420	MPa	ISO 527
Flexural Modulus, 2 mm/min	4710	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	56	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Multiaxial Impact	39	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	148	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	37	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	184	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	178	°C	ASTM D 648
CTE, -30°C to 30°C, flow	3.18E+00	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	5.5E+00	1/°C	ASTM D 696

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.
(5) 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.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	185	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	179	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.36	-	ASTM D 792
Density	1.35	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.21	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.4 - 0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955
Density	1.35	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.34	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4	hrs
Maximum Moisture Content	0.05	%
Melt Temperature	360 - 370	°C
Front - Zone 3 Temperature	350 - 360	°C
Middle - Zone 2 Temperature	340 - 350	°C
Rear - Zone 1 Temperature	325 - 340	°C
Mold Temperature	150	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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