LNP™ THERMOCOMP™ Compound JF003XXZ

Americas: COMMERCIAL

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

Product reorder name: JF003XXZ

LNP THERMOCOMP JF003XXZ is a compound based on Polyethersulfone resin containing 15% Glass Fiber.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yield	1110	kgf/cm²	ASTM D 638
Tensile Stress, break	1110	kgf/cm²	ASTM D 638
Tensile Strain, yield	3.2	%	ASTM D 638
Tensile Strain, break	3.2	%	ASTM D 638
Tensile Modulus, 50 mm/min	63200	kgf/cm²	ASTM D 638
Flexural Stress	1750	kgf/cm²	ASTM D 790
Flexural Modulus	56200	kgf/cm²	ASTM D 790
Tensile Stress, yield	110	MPa	ISO 527
Tensile Stress, break	110	MPa	ISO 527
Tensile Strain, yield	3.1	%	ISO 527
Tensile Strain, break	3.1	%	ISO 527
Tensile Modulus, 1 mm/min	6410	MPa	ISO 527
Flexural Stress	176	MPa	ISO 178
Flexural Modulus	5500	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	68	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	109	cm-kgf	ASTM D 3763
Multiaxial Impact	30	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	47	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	212	°C	ASTM D 648

(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, 1.82 MPa, 3.2mm, unannealed	207	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.4E-06	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	3.6E-06	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	5.58E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	2.81E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	214	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	207	°C	ISO 75/Af
PHYSICAL			
Density	1.48	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.3	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.4 - 0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.6 - 0.8	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.51	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.67	%	ISO 294
Density	1.48	g/cm³	ISO 1183

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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	355 - 370	°C
Front - Zone 3 Temperature	370 - 380	°C
Middle - Zone 2 Temperature	360 - 370	°C
Rear - Zone 1 Temperature	345 - 355	°C
Mold Temperature	140 - 150	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	60 - 100	rpm

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