LNP™ THERMOCOMP™ Compound LF004E

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound LF-1004 EM
Product reorder name: LF004E

LNP THERMOCOMP LF004E is a compound based on Polyetheretherketone resin containing 20% Glass Fiber. Added features of this material include: Easy Molding.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1490	kgf/cm²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Modulus, 5 mm/min	89000	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2320	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	82400	kgf/cm²	ASTM D 790
Tensile Stress, break, 5 mm/min	124	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.7	%	ISO 527
Tensile Modulus, 1 mm/min	8620	MPa	ISO 527
Flexural Stress	222	MPa	ISO 178
Flexural Modulus, 2 mm/min	7720	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	49	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Multiaxial Impact	15	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	62	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	30	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	337	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	320	°C	ASTM D 648
CTE, -30°C to 30°C, flow	2.8E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	4.5E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	335	°C	ISO 75/Bf

(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/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	305	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.45	-	ASTM D 792
Density	1.44	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.09	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.71	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.2	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Front - Zone 3 Temperature	380 - 400	°C
Middle - Zone 2 Temperature	380 - 400	°C
Rear - Zone 1 Temperature	370 - 380	°C
Mold Temperature	175 - 190	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	60 - 100	rpm

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