LNP™ THERMOCOMP™ Compound EC006

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound EC-1006
Product reorder name: EC006

LNP THERMOCOMP™ EC006 is a compound based on Polyetherimide resin containing 30% Carbon Fiber. Added features of this material include: Electrically Conductive.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break	2000	kgf/cm²	ASTM D 638
Tensile Strain, break	1.3	%	ASTM D 638
Tensile Modulus, 50 mm/min	198200	kgf/cm²	ASTM D 638
Flexural Stress	2850	kgf/cm²	ASTM D 790
Flexural Modulus	185300	kgf/cm²	ASTM D 790
Tensile Stress, break	183	MPa	ISO 527
Tensile Strain, break	1.1	%	ISO 527
Tensile Modulus, 1 mm/min	20870	MPa	ISO 527
Flexural Stress	269	MPa	ISO 178
Flexural Modulus	17930	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	38	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	79	cm-kgf	ASTM D 3763
Multiaxial Impact	25	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	26	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	217	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	2.16E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.64E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	2.25E-05	1/°C	ISO 11359-2

(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	219	°C	ISO 75/Af
PHYSICAL			
Density	1.388	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.19	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.1 - 0.3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.3 - 0.5	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.1	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.39	%	ISO 294
Wear Factor Washer	75	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.52	-	ASTM D 3702 Modified
Static COF	0.48	-	ASTM D 3702 Modified
Density	1.38	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
ELECTRICAL			
Surface Resistivity	1.E+02 - 1.E+06	Ohm	ASTM D 257

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120 - 150	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	360 - 365	°C
Front - Zone 3 Temperature	365 - 375	°C
Middle - Zone 2 Temperature	355 - 365	°C
Rear - Zone 1 Temperature	345 - 355	°C
Mold Temperature	120 - 150	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	60 - 100	rpm

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