LNP™ THERMOCOMP™ Compound EC005

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound EC-1005
Product reorder name: EC005

LNP THERMOCOMP™ EC005 is a compound based on Polyetherimide resin containing 25% Carbon Fiber. Added features of this material include: Electrically Conductive.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	2030	kgf/cm²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	186600	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	2800	kgf/cm²	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2790	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	166200	kgf/cm²	ASTM D 790
Tensile Stress, break, 5 mm/min	200	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.4	%	ISO 527
Tensile Modulus, 1 mm/min	18170	MPa	ISO 527
Flexural Modulus, 2 mm/min	16200	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	41	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	106	cm-kgf	ASTM D 3763
Multiaxial Impact	30	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	118	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	24	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	210	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	204	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	2.71E-05	1/°C	ASTM E 831

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THERMAL			
CTE, -30°C to 30°C, flow	2.05E+01	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	2.71E+01	1/°C	ASTM D 696
CTE, -40°C to 40°C, flow	1.92E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	2.71E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	212	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	207	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.38	-	ASTM D 792
Density	1.365	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.17	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.07 - 0.09	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.1 - 0.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.3 - 0.5	%	ISO 294
Density	1.37	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.27	%	ISO 62
ELECTRICAL			
Volume Resistivity	1.E+02 - 1.E+06	Ohm-cm	ASTM D 257
Surface Resistivity	1.E+02 - 1.E+05	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