LNP™ THERMOCOMP™ Compound EC005R

Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound EC-1005 MR
Product reorder name: EC005R

LNP THERMOCOMP EC005R is a compound based on Polyetherimide resin containing 25% Carbon Fiber. Added features include: Mold Release, Electrically Conductive.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1340	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	2040	kgf/cm²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	0.7	%	ASTM D 638
Tensile Modulus, 50 mm/min	428100	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2810	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	194500	kgf/cm²	ASTM D 790
Tensile Stress, yield, 5 mm/min	83	MPa	ISO 527
Tensile Stress, break, 5 mm/min	179	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	0	%	ISO 527
Tensile Strain, break, 5 mm/min	1	%	ISO 527
Tensile Modulus, 1 mm/min	22900	MPa	ISO 527
Flexural Modulus, 2 mm/min	18560	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	52	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	6	cm-kgf/cm	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	29	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	214	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	207	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.88E+01	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	2.4E+01	1/°C	ASTM E 831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	217	°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	210	°C	ISO 75/Af
PHYSICAL			
Density	1.36	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.18	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0 - 0	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0 - 0	%	ASTM D 955
Density	1.36	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.18	%	ISO 62

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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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