

LNP* Thermocomp* Compound RC003

Americas: COMMERCIAL

Also known as: RC-1003
Product Reorder Name: RC003

LNP THERMOCOMP* RC003 is a compound based on Nylon 66 resin containing Carbon Fiber. Added features of this material include:
Electrically Conductive.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, break	201	MPa	ASTM D 638
Tensile Strain, break	2.6	%	ASTM D 638
Tensile Modulus, 50 mm/min	11720	MPa	ASTM D 638
Flexural Stress	302	MPa	ASTM D 790
Flexural Modulus	11260	MPa	ASTM D 790
Tensile Stress, break	180	MPa	ISO 527
Tensile Strain, break	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	11550	MPa	ISO 527
Flexural Stress	287	MPa	ISO 178
Flexural Modulus	10650	MPa	ISO 178
IMPACT			
	Value	Unit	Standard
Izod Impact, unnotched, 23°C	432	J/m	ASTM D 4812
Izod Impact, notched, 23°C	53	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	8	J	ASTM D 3763
Multiaxial Impact	2	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
THERMAL			
	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	260	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	250	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.43E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.85E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.43E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.86E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	250	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	261	°C	ISO 75/Af
PHYSICAL			
	Value	Unit	Standard
Density	1.203	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.93	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.2 - 0.3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.7 - 0.8	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.17 - 0.26	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	0.68 - 0.78	%	ISO 294
Density	1.2	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.47	%	ISO 62
ELECTRICAL			
	Value	Unit	Standard

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15 - 0.25	%
Melt Temperature	280 - 305	°C
Front - Zone 3 Temperature	295 - 305	°C
Middle - Zone 2 Temperature	280 - 295	°C
Rear - Zone 1 Temperature	265 - 275	°C
Mold Temperature	95 - 110	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

Source GMD, last updated:10/02/2004

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(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.

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