

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND RC008H

FORMERLY KNOWN AS "RC-1008"

## DESCRIPTION

LNP THERMOCOMP RC008H compound is based on Nylon 6/6 resin containing 40% carbon fiber. Added features of this grade include: Electrically Conductive, Healthcare.

GENERAL INFORMATION	
Features	Electrically Conductive, Healthcare/Formula lock, Carbon fiber filled, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding
INDUSTRY	SUB INDUSTRY
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging

## TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, brk, Type I, 5 mm/min	288	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D638
Tensile Modulus, 5 mm/min	32000	MPa	ASTM D638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	429	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	26100	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	1219	J/m	ASTM D4812
Izod Impact, notched, 23°C	108	J/m	ASTM D256
Multiaxial Impact	4	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	15	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	71	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	10	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 1.82 MPa, 3.2mm, unannealed	255	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	3.7E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm	261	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	252	°C	ISO 75/Af
Relative Temp Index, Elec <sup>(2)</sup>	65	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	65	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	65	°C	UL 746B

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.33	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.54	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(3)</sup>	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(3)</sup>	0.4 – 0.6	%	ASTM D955
Density	1.34	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.78	%	ISO 62
<b>FLAME CHARACTERISTICS <sup>(2)</sup></b>			
UL Yellow Card Link	<a href="#">E121562-101282584</a>	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
<b>INJECTION MOLDING <sup>(4)</sup></b>			
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	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) 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.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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