LNP™ THERMOCOMP™ Compound RC006XXH

RC-1006 HC

DESCRIPTION

LNP THERMOCOMP RC006XXH compound is based on Nylon 6/6 resin containing 30% 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 (PCR contains <50ppm total organic fluorine content)
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
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	269	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Tensile Modulus, 5 mm/min	25200	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	382	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	20300	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	267	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	24760	MPa	ISO 527
Flexural Stress	364	MPa	ISO 178
Flexural Modulus, 2 mm/min	18960	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	1080	J/m	ASTM D4812
Izod Impact, notched, 23°C	102	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	64	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	262	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	257	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.5E-05	1/°C	ASTM D696

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, xflow	6.3E-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	257	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.27	-	ASTM D792
Density	1.274	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.7	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.6 – 0.8	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	1	%	ISO 62
INJECTION MOLDING [3]			
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) 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.

(3) 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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