LNP™ THERMOCOMP™ COMPOUND RC006

RC-1006
REGION EUROPE

DESCRIPTION

LNP THERMOCOMP RC006 compound is based on Nylon 6/6 resin containing 30% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, 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
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 5 mm/min	261	MPa	ISO 527
Tensile Stress, break, 5 mm/min	250	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	22300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	360	MPa	ISO 178
Flexural Stress, break, 2 mm/min	360	MPa	ISO 178
Flexural Modulus, 2 mm/min	18900	MPa	ISO 178
Hardness, Rockwell L	108	-	ISO 2039-2
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	67	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	70	kJ/m²	ISO 179/1eU
THERMAL [1]			
CTE, 23°C to 60°C, flow	8.E-06	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.6E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/120	255	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	260	°C	ISO 75/Be

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	257	°C	ISO 75/Ae
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
PHYSICAL (1)			
Mold Shrinkage on Tensile Bar, flow (2)	0.1 – 0.3	%	SABIC method
Density	1.27	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	1.1	%	ISO 62-1
Water Absorption, (23°C/saturated)	4.5	%	ISO 62-1
ELECTRICAL (1)			
Surface Resistivity	1.E+02 – 1.E+04	Ω	ASTM D257
Volume Resistivity	4.32E+03	Ω.cm	IEC 60093
Surface Resistivity, ROA	4.32E+03	Ω	IEC 60093
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating (3)	1.6	mm	UL 94 by SABIC-IP
Oxygen Index (LOI)	27	%	ISO 4589
INJECTION MOLDING (4)			
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) UL rating shown here is based on internal measurements.

(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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

DISCLAIMER