LNP™ THERMOCOMP™ COMPOUND RC003SXS

RC-1003 HS

DESCRIPTION

LNP THERMOCOMP RC003SXS compound is based on Nylon 6/6 resin containing 15% carbon fiber. Added features of this grade include: Electrically Conductive, Heat Stabilized.

GENERAL INFORMATION	
Features	Electrically Conductive, Heat Stabilized, 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 20260206

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	170	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	13000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	230	MPa	ISO 178
Flexural Modulus, 2 mm/min	10000	MPa	ISO 178
Hardness, Rockwell L	105	-	ISO 2039-2
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	3	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eU
THERMAL [1]			
CTE, 23°C to 60°C, flow	2.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.1E-04	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	252	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	250	°C	ISO 75/Ae
PHYSICAL [1]			
Mold Shrinkage on Tensile Bar, flow [2]	0.1 – 0.2	%	SABIC method

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	5.5	%	ISO 62-1
ELECTRICAL [1]			
Volume Resistivity	1.78E+05	Ω.cm	IEC 60093
Surface Resistivity, ROA	1.78E+05	Ω	IEC 60093
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating [3]	1.6	mm	UL 94 by SABIC-IP
Oxygen Index (LOI)	28	%	ISO 4589
INJECTION MOLDING [4]			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	320 – 360	°C	
Nozzle Temperature	280 – 320	°C	
Front - Zone 3 Temperature	320 – 360	°C	
Middle - Zone 2 Temperature	320 – 360	°C	
Rear - Zone 1 Temperature	280 – 320	°C	
Hopper Temperature	60 – 90	°C	
Mold Temperature	80 – 100	°C	

(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.

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