LNP™ THERMOCOMP™ COMPOUND AC004

AC-1004

DESCRIPTION

LNP THERMOCOMP AC004 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 20% 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	Acrylonitrile Butadiene Styrene (ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL (1)			
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Modulus, 50 mm/min	12960	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	131	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10610	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Flexural Stress	152	MPa	ISO 178
Flexural Modulus, 2 mm/min	12750	MPa	ISO 178
IMPACT (1)			
Izod Impact, unnotched, 23°C	320	J/m	ASTM D4812
Izod Impact, notched, 23°C	64	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	16	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL (1)			
HDT, 1.82 MPa, 3.2mm, unannealed	100	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.0E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.2E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	101	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL (1)			
Specific Gravity	1.14	-	ASTM D792
Density	1.14	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.25	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.3 – 0.6	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.25	%	ISO 62
ELECTRICAL (1)			
Surface Resistivity	1.E+02 – 1.E+04	Ω	ASTM D257
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05 – 0.1	%	
Melt Temperature	260	°C	
Front - Zone 3 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	230 – 245	°C	
Rear - Zone 1 Temperature	205 – 215	°C	
Mold Temperature	70 – 80	°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.

DISCLAIMER