LNP™ THERMOCOMP™ COMPOUND RF007ES

RF-1007 EM HS

DESCRIPTION

LNP THERMOCOMP RF007ES is a compound based on Nylon 66 resin containing 35% Glass Fiber. Added features of this material include: Heat Stabilized, Easy Molding.

TYPICAL PROPERTY VALUES

Revision 20200110

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	152	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	151	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	10680	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	227	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	226	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	9320	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	149	MPa	ISO 527
Tensile Stress, break, 5 mm/min	149	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.3	%	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	10320	MPa	ISO 527
Flexural Stress	220	MPa	ISO 178
Flexural Modulus, 2 mm/min	9050	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	695	J/m	ASTM D 4812
Izod Impact, notched, 23°C	62	J/m	ASTM D 256
Multiaxial Impact	2	J	ISO 6603
Instrumented Impact Total Energy, 23°C	6	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	41	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	255	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	237	°C	ASTM D 648
CTE, -30°C to 30°C, flow	2.6E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	7.9E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	252	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	228	°C	ISO 75/Af
Relative Temp Index, Elec [1]	130	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	115	°C	UL 746B
PHYSICAL			
Specific Gravity	1.41	-	ASTM D 792

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.4	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.84	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.1 – 0.3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.9 – 2	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	1.2	%	ISO 62
ELECTRICAL			
Hot-Wire Ignition (HWI), PLC 4	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101281596	-	-
UL Yellow Card Link 2	E207780-103093602	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
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) 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.

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