LNP™ THERMOCOMP™ COMPOUND RF0039S

RF-1003 FR HS

DESCRIPTION

LNP THERMOCOMP* RF0039S is a compound based on Nylon 66 resin containing 15% Glass Fiber, Flame Retardant. Added features of this material include: Flame Retardant, Heat Stabilized.

TYPICAL PROPERTY VALUES

Revision 20200109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, break	100	MPa	ASTM D 638
Tensile Strain, break	3	%	ASTM D 638
Tensile Modulus, 50 mm/min	6060	MPa	ASTM D 638
Flexural Stress	160	MPa	ASTM D 790
Flexural Modulus	5170	MPa	ASTM D 790
Tensile Stress, break	98	MPa	ISO 527
Tensile Strain, break	2.9	%	ISO 527
Tensile Modulus, 1 mm/min	6300	MPa	ISO 527
Flexural Stress	164	MPa	ISO 178
Flexural Modulus	600	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	523	J/m	ASTM D 4812
Izod Impact, notched, 23°C	42	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	5	J	ASTM D 3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	251	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	226	°C	ASTM D 648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	219	°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			
Density	1.487	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.49	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.9	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1.3	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.89	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	1.29	%	ISO 294
Density	1.48	g/cm³	ISO 1183
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥1.7	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.7	mm	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101281598	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.7	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	275 – 290	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	80 – 95	°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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