LNP™ THERMOCOMP™ Compound RF0057E

RF-1005 Z270

DESCRIPTION

LNP THERMOCOMP RF0057E compound is based on Nylon 6/6 resin containing 25% glass fiber. Added features of this grade include: Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Non Cl/Br flame retardant, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding
Regional Availability	Asia, Americas

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries, Recreational/Specialty Vehicles
Building and Construction	Building Component
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260722

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	130	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.4	%	ISO 527
Tensile Modulus, 1 mm/min	9400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	190	MPa	ISO 178
Flexural Modulus, 2 mm/min	8000	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL [1]			
Ball Pressure Test, approximate maximum	240	°C	IEC 60695-10-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	240	°C	ISO 75/Af
Relative Temp Index, Elec [2]	140	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	110	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	140	°C	UL 746B
PHYSICAL [1]			
Density	1.39	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs [3]	0.15 – 0.4	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [3]	1 – 1.2	%	ISO 294
Water Absorption, (23°C/24hrs)	2.64	%	ISO 62-1

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
ELECTRICAL [1]			
Volume Resistivity	1.E+12	Ω.cm	ASTM D257
Dielectric Strength, in air, 1.6 mm	16	kV/mm	ASTM D149
Comparative Tracking Index	600	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥0.4	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥0.4	mm	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101345284	-	-
UL Yellow Card Link 2	E121562-101358203	-	-
UL Yellow Card Link 3	E207780-101345251	-	-
UL Yellow Card Link 4	E207780-102614475	-	-
UL Recognized, 94-5VA Flame Class Rating	≥0.9	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥0.4	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.6 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.9 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.8 mm	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.4 mm	775	°C	IEC 60695-2-13
Glow Wire Flammability Index			
3.0 mm	960	°C	IEC 60695-2-12
2.0 mm	960	°C	IEC 60695-2-12
1.6 mm	960	°C	IEC 60695-2-12
1.5 mm	960	°C	IEC 60695-2-12
0.9 mm	960	°C	IEC 60695-2-12
0.8 mm	960	°C	IEC 60695-2-12
0.4 mm	960	°C	IEC 60695-2-12
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	265 – 275	°C	
Front - Zone 3 Temperature	260 – 270	°C	
Middle - Zone 2 Temperature	255 – 265	°C	
Rear - Zone 1 Temperature	250 – 260	°C	
Mold Temperature	60 – 100	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

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(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) 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.

(3) 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.

(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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