

LG Chemical LUPOY® GN5001RF

Description: Injection Molding, PC/ABS, Halogen Free Flame Retardant, Good Flow
Application: E&E (TV, Navigation Housing)

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Maximum Moisture Content	0.020	0.020	Injection Molding
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	16 g/10 min @Load 2.16 kg, Temperature 250 °C	16 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113	113	ASTM D785
Tensile Strength, Yield	58.8 MPa @Thickness 3.20 mm	8530 psi @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	50 % @Thickness 3.20 mm	50 % @Thickness 0.126 in	50mm/min; ASTM D638
Flexural Yield Strength	88.3 MPa @Thickness 3.20 mm	12800 psi @Thickness 0.126 in	10mm/min; ASTM D790
Flexural Modulus	2.45 GPa @Thickness 3.20 mm	356 ksi @Thickness 0.126 in	10mm/min; ASTM D790
Izod Impact, Notched	>= 3.92 J/cm @Thickness 3.20 mm, Temperature 23.0 °C	>= 7.35 ft-lb/in @Thickness 0.126 in, Temperature 73.4 °F	ASTM D256

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	
Hot Wire Ignition, HWI	30 - 60 sec @Thickness >=1.50 mm	30 - 60 sec @Thickness >=0.0591 in	
	30 - 60 sec @Thickness >=2.00 mm	30 - 60 sec @Thickness >=0.0787 in	
	30 - 60 sec @Thickness >=2.50 mm	30 - 60 sec @Thickness >=0.0984 in	
High Amp Arc Ignition, HAI	30 - 60 arcs @Thickness 1.50 mm	30 - 60 arcs @Thickness 0.0591 in	
	>= 120 arcs @Thickness 2.00 mm	>= 120 arcs @Thickness 0.0787 in	

	>= 120 arcs @Thickness 2.50 mm	>= 120 arcs @Thickness 0.0984 in
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	92.0 °C @Thickness 6.40 mm	198 °F @Thickness 0.252 in	Unannealed; ASTM D648
UL RTI, Electrical	60.0 °C @Thickness >=1.20 mm	140 °F @Thickness >=0.0472 in	
	80.0 °C @Thickness >=1.50 mm	176 °F @Thickness >=0.0591 in	
	80.0 °C @Thickness >=2.00 mm	176 °F @Thickness >=0.0787 in	
	80.0 °C @Thickness >=2.50 mm	176 °F @Thickness >=0.0984 in	
	80.0 °C @Thickness >=3.00 mm	176 °F @Thickness >=0.118 in	
UL RTI, Mechanical with Impact	60.0 °C @Thickness >=1.20 mm	140 °F @Thickness >=0.0472 in	
	80.0 °C @Thickness >=1.50 mm	176 °F @Thickness >=0.0591 in	
	80.0 °C @Thickness >=2.00 mm	176 °F @Thickness >=0.0787 in	
	80.0 °C @Thickness >=2.50 mm	176 °F @Thickness >=0.0984 in	
	80.0 °C @Thickness >=3.00 mm	176 °F @Thickness >=0.118 in	
UL RTI, Mechanical without Impact	60.0 °C @Thickness >=1.20 mm	140 °F @Thickness >=0.0472 in	
	85.0 °C @Thickness >=1.50 mm	185 °F @Thickness >=0.0591 in	
	85.0 °C @Thickness >=2.00 mm	185 °F @Thickness >=0.0787 in	
	85.0 °C @Thickness >=2.50 mm	185 °F @Thickness >=0.0984 in	
	85.0 °C @Thickness >=3.00 mm	185 °F @Thickness >=0.118 in	

Flammability, UL94	V-0 @Thickness >=1.20 mm	V-0 @Thickness >=0.0472 in
	V-0 @Thickness >=1.50 mm	V-0 @Thickness >=0.0591 in
	V-0 @Thickness >=2.00 mm	V-0 @Thickness >=0.0787 in
	V-0 @Thickness >=2.50 mm	V-0 @Thickness >=0.0984 in
	V-0 @Thickness >=3.00 mm	V-0 @Thickness >=0.118 in
	5VB @Thickness >=2.50 mm	5VB @Thickness >=0.0984 in
	5VB @Thickness >=3.00 mm	5VB @Thickness >=0.118 in
	5VA @Thickness >=1.50 mm	5VA @Thickness >=0.0591 in
	5VA @Thickness >=2.00 mm	5VA @Thickness >=0.0787 in

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	220 - 240 °C	428 - 464 °F	Injection Molding
Middle Barrel Temperature	235 - 255 °C	455 - 491 °F	Injection Molding
Front Barrel Temperature	250 - 265 °C	482 - 509 °F	Injection Molding
Nozzle Temperature	250 - 265 °C	482 - 509 °F	Injection Molding
Melt Temperature	235 - 265 °C	455 - 509 °F	Injection Molding
Mold Temperature	50.0 - 80.0 °C	122 - 176 °F	Injection Molding
Drying Temperature	75.0 - 85.0 °C	167 - 185 °F	Injection Molding
Dry Time	3.00 - 5.00 hour	3.00 - 5.00 hour	Injection Molding
Back Pressure	0.0200 - 0.0600 MPa	2.90 - 8.70 psi	Injection Molding
Screw Speed	40 - 70 rpm	40 - 70 rpm	Injection Molding