LUPOY GN5001RFT

Injection Molding, PC/ABS, Cl/Br Free Flame Retardancy

Application

Electronics, Home Appliances, Industrial Goods, Small Devices

Properties	Condition	Method	Unit	Typical Value
Physical				
Specific Gravity	23℃	ISO 1183		1.19
Shrinkage		ISO 294-4		
Flow	2.0mm		%	0.4~0.6
Cross-flow	2.0mm		%	0.4~0.6
Melt Flow Rate	250℃, 2.16kg	ISO 1133	g/10min	28
Water Absorption	23°C, 50% RH, 24hr	ISO 62	%	0.20
Mechanical				
Tensile Strength		ISO 527		
@Yield	4.0mm, 50mm/min		MPa	61
@Break	4.0mm, 50mm/min		MPa	46
Tensile Elongation		ISO 527		
@Yield	4.0mm, 50mm/min		%	3.0
@Break	4.0mm, 50mm/min		%	20
Tensile Modulus	4.0mm, 1.0mm/min	ISO 527	MPa	2,500
Flexural Strength	4.0mm, 2.0mm/min	ISO 178	MPa	86
Flexural Modulus	4.0mm, 2.0mm/min	ISO 178	MPa	2,360
IZOD Impact Strength		ISO 180		
4.0mm, Notched	23℃		kJ/m²	29
	-30℃		kJ/m²	10
	-40℃		kJ/m²	9.0
Charpy Impact Strength		ISO 179		
4.0mm, Notched	23℃		kJ/m²	14
	-30℃		kJ/m²	10
	-40℃		kJ/m²	9.0
Rockwell Hardness	R-Scale	ISO 2039		120
Shore Hardness		ISO 48-4		
Shore D	15s			
Thermal				
Melt Temperature	Peak	ISO 11357-3	℃	
Heat Deflection Temperature		ISO 75		
0.45MPa	4.0mm, Flatwise Unannealed		℃	80
1.8MPa	4.0mm, Flatwise Unannealed		℃	73
Vicat Softening Temperature	50N, 50℃/hr	ISO 306	℃	85
Coefficient of Linear Thermal Expansion		ISO 11359		
Flow	-30℃ ~ 80℃		10^{-6}m/m·℃	83
Cross-flow	-30℃ ~ 80℃		10^{-6}m/m·℃	90
Thermal Conductivity		ASTM E1461		

In-plane			W/m·K	
Through-plane			W/m·K	

Flammability

Flammability		UL94		
			mm, Class	1.50mm, 5VB
			mm, Class	0.80mm, V-2
			mm, Class	2.50mm, 5VA
			mm, Class	1.20mm, V-0
Relative Temperature Index(RTI)		UL746B		
Electrical	Min. Thickness		mm	0.80
	Temp		℃	60
	Max. Temp		℃	80
	Thickness		mm	1.50
Mechanical With Impact	Min. Thickness		mm	0.80
	Temp		℃	60
	Max. Temp		℃	80
	Thickness		mm	1.50
Mechanical Without Impact	Min. Thickness		mm	0.80
	Temp		℃	60
	Max. Temp		℃	85
	Thickness		mm	1.50

Electrical

Comparative Tracking Index(CTI)	Solution A	UL746A	PLC	2
Surface Resistivity	23℃	IEC60093	Ohm	1E+15
Volume Resistivity	23℃	IEC60093	Ohm·m	1E+15
Dielectric Constant	23°C	ASTM D150		2.8
Dielectric Strength	23℃, 2.0mm	ASTM D149	kV/mm	22
EMI Shield	1GHz, 3.0mm	ASTM D4935	dB	

Note) Typical values can be used only for the purpose of selecting material, and there can be variation within normal tolerances for various colors.
Values given should not be interpreted as specification and not be used for designing part or tool.
All properties, except melt flow rate are measured by injection molded specimens after 48 hours storage at 23℃, 50% relative humidity.

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Processing Conditions (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	75~85
Drying Time		hrs	3~4
Maximum Moisture Content		%	0.02
Melt Temperature		℃	235~265
Cylinder Temperature	Rear	℃	220~240
	Middle	℃	235~255
	Front	℃	250~265
Nozzle Temperature		℃	250~265
Mold Temperature		℃	50~80

Note) These guides may not apply directly or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding and so on.