

LUPOY GP1007LU

Injection Molding, PC, Non-flame Retardancy

Description

General Purpose , UV Resistant

Application

Auto, Industrial Goods

Properties	Condition	Method	Unit	Typical Value
Physical				
Specific Gravity	23°C	ASTM D792		1.20
Shrinkage		ASTM D955		
Flow	2.0mm		%	0.6~0.8
Cross-flow	2.0mm		%	0.6~0.8
Melt Flow Rate	300°C, 1.2kg	ASTM D1238	g/10min	23
Water Absorption	23°C, 50% RH	ASTM D570	%	0.20
Mechanical				
Tensile Strength		ASTM D638		
@Yield	3.2mm, 50mm/min		kgf/cm ²	630
@Break	3.2mm, 50mm/min		kgf/cm ²	680
Tensile Elongation		ASTM D638		
@Yield	3.2mm, 50mm/min		%	6.0
@Break	3.2mm, 50mm/min		%	120
Tensile Modulus	3.2mm, 50mm/min	ASTM D638	kgf/cm ²	23,830
Flexural Strength	3.2mm, 10mm/min	ASTM D790	kgf/cm ²	1,090
Flexural Modulus	3.2mm, 10mm/min	ASTM D790	kgf/cm ²	24,000
IZOD Impact Strength		ASTM D256		
3.2mm, Notched	23°C		kgf·cm/cm	72
	-30°C		kgf·cm/cm	9.0
6.4mm, Notched	23°C		kgf·cm/cm	8.0
	-30°C		kgf·cm/cm	8.0
	-40°C		kgf·cm/cm	8.0
Rockwell Hardness	R-Scale	ASTM D785		118
Shore Hardness		ASTM D2240		
Shore A	15s			
Thermal				
Melt Temperature	Peak	ASTM D3418	°C	
Heat Deflection Temperature		ASTM D648		
4.6kgf	6.4mm, Unannealed		°C	136
18.6kgf	6.4mm, Unannealed		°C	132
Vicat Softening Temperature	5kg, 50°C/hr	ASTM D1525	°C	141
Coefficient of Linear Thermal Expansion		ASTM D696		
Flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	73
Cross-flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	80
Thermal Conductivity		ASTM E1461		
In-plane			W/m·K	
Through-plane			W/m·K	

Flammability

Flammability	UL94			
			mm, Class	0.50mm, V-2
Relative Temperature Index(RTI)		UL746B		
Electrical	Min. Thickness		mm	0.50
	Temp		°C	80
	Max. Temp		°C	125
	Thickness		mm	1.60
Mechanical With Impact	Min. Thickness		mm	0.50
	Temp		°C	80
	Max. Temp		°C	115
	Thickness		mm	1.60
Mechanical Without Impact	Min. Thickness		mm	0.50
	Temp		°C	80
	Max. Temp		°C	125
	Thickness		mm	1.60

Electrical

Comparative Tracking Index(CTI)	Solution A	UL746A	PLC	2
Surface Resistivity	23°C	ASTM D257	Ohm	1E+15
Volume Resistivity	23°C	ASTM D257	Ohm·m	1E+15
Dielectric Constant	23°C	ASTM D150		2.8
Dielectric Strength	23°C, 2.0mm	ASTM D149	kV/mm	21
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°C, 50% relative humidity.

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Processing Conditions (Injection Molding)

Processing Parameters	Unit	Value	
Drying Temperature	°C	100~120	
Drying Time	hrs	3~5	
Maximum Moisture Content	%	0.02	
Melt Temperature	°C	300~320	
Cylinder Temperature	Rear	°C	260~280
	Middle	°C	280~300
	Front	°C	300~320
Nozzle Temperature	°C	300~320	
Mold Temperature	°C	80~120	

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.