LUPOY GP1000MU

Injection Molding, PC, Non-flame Retardancy

Description

General Purpose , UV Resistance

Application

Auto, Electronics, Home Appliances, Industrial Goods

Properties	Condition	Method	Unit	Typical Value
Physical				
Specific Gravity	23℃	ASTM D792		1.20
Shrinkage		ASTM D955		
Flow	2.0mm		%	0.6~0.8
Cross-flow	2.0mm		%	0.7~0.9
Melt Flow Rate	300℃, 1.2kg	ASTM D1238	g/10min	11.0
Water Absorption	23°C, 50% RH	ASTM D570	%	0.20
Mechanical				
Tensile Strength		ASTM D638		
@Yield	3.2mm, 50mm/min		kgf/cm²	630
@Break	3.2mm, 50mm/min		kgf/cm²	680
Tensile Elongation		ASTM D638		
@Yield	3.2mm, 50mm/min		%	6
@Break	3.2mm, 50mm/min		%	142
Tensile Modulus	3.2mm, 50mm/min	ASTM D638	kgf/cm²	23,720
Flexural Strength	3.2mm, 10mm/min	ASTM D790	kgf/cm²	1,000
Flexural Modulus	3.2mm, 10mm/min	ASTM D790	kgf/cm²	23,000
IZOD Impact Strength		ASTM D256		
3.2mm, Notched	23℃		kgf·cm/cm	75.0
	-30℃		kgf·cm/cm	10.0
6.4mm, Notched	23℃		kgf·cm/cm	10.0
	-30℃		kgf·cm/cm	9.0
	-40℃		kgf·cm/cm	8.0
Rockwell Hardness	R-Scale	ASTM D785		118
Thermal				
Heat Deflection Temperature		ASTM D648		
4.6kgf	6.4mm, Unannealed		℃	140
18.6kgf	6.4mm, Unannealed		℃	130
Vicat Softening Temperature	5kg, 50℃/hr	ASTM D1525	℃	141
Coefficient of Linear Thermal Expansion		ASTM D696		
Flow	-30℃ ~ 80℃		10^{-6}m/m·℃	77
Cross-flow	-30℃ ~ 80℃		10^{-6}m/m·℃	79

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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Flammability

Flammability		UL94		
			mm, Class	0.37mm, HB
Relative Temperature Index(RTI)		UL746B		
Electrical	Min. Thickness		mm	0.37
	Temp		℃	80
	Max. Temp		℃	130
	Thickness		mm	1.50
Mechanical With Impact	Min. Thickness		mm	0.37
	Temp		℃	80
	Max. Temp		℃	130
	Thickness		mm	1.50
Mechanical Without Impact	Min. Thickness		mm	0.37
	Temp		℃	80
	Max. Temp		℃	130
	Thickness		mm	1.50

Electrical

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

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Processing Conditions (Injection Molding)

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

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

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