

LUPOX GP1006FD

Injection Molding, PBT, Flame Retardancy

Description

General Purpose

Application

Auto, Electronics, Home Appliances, Industrial Goods

Properties	Condition	Method	Unit	Typical Value
Physical				
Specific Gravity	23°C	ISO 1183		1.42
Shrinkage		ISO 294-4		
Flow	2.0mm		%	1.2~1.6
Cross-flow	2.0mm		%	1.4~2.0
Melt Flow Rate	250°C, 2.16kg	ISO 1133	g/10min	13.6
Water Absorption	23°C, 50% RH	ISO 62	%	0.05
Mechanical				
Tensile Strength		ISO 527		
@Yield	4.0mm, 50mm/min		MPa	50
@Break	4.0mm, 50mm/min		MPa	21
Tensile Elongation		ISO 527		
@Yield	4.0mm, 50mm/min		%	5
@Break	4.0mm, 50mm/min		%	20
Tensile Modulus	4.0mm, 1mm/min	ISO 527	MPa	2,300
Flexural Strength	4.0mm, 2.0mm/min	ISO 178	MPa	77
Flexural Modulus	4.0mm, 2.0mm/min	ISO 178	MPa	2,100
IZOD Impact Strength		ISO 180		
4.0mm, Notched	23°C		kJ/m ²	6.2
	-30°C		kJ/m ²	5.9
Charpy Impact Strength		ISO 179		
4.0mm, Notched	23°C		kJ/m ²	6.0
	-30°C		kJ/m ²	4.0
Rockwell Hardness	R-Scale	ISO 2039		116
Thermal				
Melt Temperature	Peak	ISO 11357-3	°C	223
Heat Deflection Temperature	4.0mm, Flatwise	ISO 75		
0.45MPa	Unannealed		°C	135
1.8MPa	4.0mm, Flatwise		°C	62
	Unannealed			
Vicat Softening Temperature	50N, 50°C/hr	ISO 306	°C	149

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.

Issued Date : 2025-12-03

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Coefficient of Linear Thermal Expansion		ISO 11359		
Flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	113
Cross-flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	123

Flammability

Flammability		UL94	mm, Class	3mm, 5VA
Relative Temperature Index(RTI)		UL746B		
Electrical	Min. Thickness		mm	0.55
	Temp		°C	75
	Max. Temp		°C	130
	Thickness		mm	0.71
Mechanical With Impact	Min. Thickness		mm	0.55
	Temp		°C	75
	Max. Temp		°C	130
	Thickness		mm	0.71
Mechanical Without Impact	Min. Thickness		mm	0.55
	Temp		°C	75
	Max. Temp		°C	140
	Thickness		mm	0.71
Glow Wire Flammability Index(GWFI)		IEC60695-2-12	mm, °C	1.50mm, 960°C

Electrical

Comparative Tracking Index(CTI)	Solution A	UL746A	PLC	0
Dielectric Constant	23°C	ASTM D150		3.0
Dielectric Strength	23°C, 2.0mm	ASTM D149	kV/mm	20

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Processing Conditions (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		°C	90~110
Drying Time		hrs	4~6
Maximum Moisture Content		%	0.02
Melt Temperature		°C	230~260
Cylinder Temperature	Rear	°C	230~250
	Middle	°C	230~250
	Front	°C	230~250
Nozzle Temperature		°C	240~260
Mold Temperature		°C	60~100

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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