

LUMID GN1001BF

Injection Molding, PA66, Cl/Br Free 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		1.15
Shrinkage		ISO 294-4		
Flow	2.0mm		%	0.8~1.1
Cross-flow	2.0mm		%	0.7~1.1
Water Absorption	23°C, 50% RH	ISO 62	%	2.50
Mechanical				
Tensile Strength		ISO 527		79
@Yield	4.0mm, 50mm/min		MPa	15
Tensile Elongation		ISO 527		3,700
@Break	4.0mm, 50mm/min		%	108
Tensile Modulus	4.0mm, 1mm/min	ISO 527	MPa	
Flexural Strength	4.0mm, 2.0mm/min	ISO 178	MPa	2,800
Flexural Modulus	4.0mm, 2.0mm/min	ISO 178	MPa	
IZOD Impact Strength		ISO 180		5.5
4.0mm, Notched	23°C		kJ/m ²	4.5
	-30°C		kJ/m ²	
Charpy Impact Strength		ISO 179		4.9
4.0mm, Notched	23°C		kJ/m ²	3.4
	-30°C		kJ/m ²	
Rockwell Hardness	R-Scale	ISO 2039		112
Thermal				
Melt Temperature	Peak	ISO 11357-3	°C	260
Heat Deflection Temperature	4.0mm, Flatwise	ISO 75		
0.45MPa	Unannealed		°C	209
1.8MPa	4.0mm, Flatwise		°C	61
	Unannealed			
Vicat Softening Temperature	50N, 50°C/hr	ISO 306	°C	219
Coefficient of Linear Thermal Expansion		ISO 11359		
Flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	61
Cross-flow	-30°C ~ 80°C		10 ⁻⁶ m/m·°C	89

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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Flammability

Flammability		UL94	mm, Class	0.8mm, V-0
Relative Temperature Index(RTI)		UL746B		
Electrical	Min. Thickness		mm	0.40
	Temp		°C	130
	Max. Temp		°C	130
	Thickness		mm	3.00
Mechanical With Impact	Min. Thickness		mm	0.40
	Temp		°C	90
	Max. Temp		°C	90
	Thickness		mm	3.00
Mechanical Without Impact	Min. Thickness		mm	0.40
	Temp		°C	105
	Max. Temp		°C	105
	Thickness		mm	3.00
Glow Wire Flammability Index(GWFI)		IEC60695-2-12	mm, °C	1.50mm, 960°C
Glow Wire Ignition Temperature(GWIT)		IEC60695-2-13	mm, °C	1.50mm, 900°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	22

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Processing Conditions (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		°C	80~100
Drying Time		hrs	4~5
Maximum Moisture Content		%	0.12
Melt Temperature		°C	260~280
Cylinder Temperature	Rear	°C	255~270
	Middle	°C	260~275
	Front	°C	260~275
Nozzle Temperature		°C	270~280
Mold Temperature		°C	60~90

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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