SolutionPartner

LG Chem

LUMID GP2251AF

Injection Molding, PA6+GF25%

Description

Flame Retardant

Application

Auto & E&E part

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity	23℃	ASTM D792	-	1.6
Molding Shrinkage, 3.2mm	23℃	ASTM D955	%	0.4 ~ 0.9
Melt Flow Rate		ASTM D1238	g/10min	
Water Absorption		ASTM D570	%	0.7
Mechanical				
Tensile Strength, 3.2mm		ASTM D638		
@ Break	5mm/min		kg/cm^2	1,650
Tensile Elongation, 3.2mm		ASTM D638		
@ Break	5mm/min		%	3
Flexural Strength, 3.2mm	1.3mm/min	ASTM D790	kg/cm^2	2,250
Flexural Modulus, 3.2mm	1.3mm/min	ASTM D790	kg/cm^2	90,000
IZOD Impact Strength, 6.4mm		ASTM D256		
(Notched)	23℃		kg·cm/cm	11
	-30℃		kg·cm/cm	
Rockwell Hardness	R-Scale	ASTM D785	-	121
Thermal				
Melting Temperature		ASTM D3418	℃	220
Heat Deflection Temperature, 6.4mm		ASTM D648		
(Unannealed)	18.6kg		℃	190
	4.6kg		℃	
Coefficient of Linear Thermal Expansion		ASTM D696		
Flow			10^{-5} m/m℃	4.1
Cross-flow			10^{-5} m/m℃	
Flammability		UL94		
0.8mm			class	V-0

Note) Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.
Values given should not be interpreted as specification and not be used for part or tool design.
All properties, except melt flow rate are measured on injection molulded specimens and after 48 hours storage at 23℃, 50% relative humidty.

Updated : 9-Nov-09

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Electrical

Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts	
Surface Resistivity		IEC 60093	Ohm	
Volume Resistivity	23℃	ASTM D257	Ohm·cm	1.0E+15
Arc Resistance	23℃	ASTM D495	sec	90
Dielectric Strength, 1mm	23℃	ASTM D149	kV/mm	21
Dielectric Constant (10^6 Hz)	23℃	ASTM D150		3.8

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Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	80 ~ 100
Drying Time		hrs	4 ~ 5
Maximum Moisture Content		%	0.09
Melt Temperature		℃	240 ~ 265
Cylinder Temperature	Rear	℃	230 ~ 260
	Middle	℃	240 ~ 270
	Front	℃	240 ~ 270
Nozzle Temperature		℃	240 ~ 270
Mold Temperature		℃	80 ~ 100
Back Pressure	Hydraulic	kg/cm^2	10 ~ 30
	Electronic	kg/cm^2	100 ~ 300
Screw Speed		rpm	30 ~ 60

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.
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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