

LUMID GP1100AW

Injection Molding, PA6

Description

Low Viscosity

Application

Automotive, E&E

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity	23℃	ASTM D792	-	1.13
Molding Shrinkage (Flow), 3.2mm	23℃	ASTM D955	%	1.0 ~ 1.4
Melt Flow Rate		ASTM D1238	g/10min	
Water Absorption		ASTM D570	%	1.7
Mechanical				
Tensile Strength, 3.2mm @ Yield	50mm/min	ASTM D638	kg/cm ²	800
Tensile Elongation, 3.2mm @ Break	50mm/min	ASTM D638	%	60
Flexural Strength, 6.4mm	2.8mm/min	ASTM D790	kg/cm ²	1,000
Flexural Modulus, 6.4mm	2.8mm/min	ASTM D790	kg/cm ²	27,000
IZOD Impact Strength, 6.4mm (Notched)	23℃	ASTM D256	kg-cm/cm	5
	-30℃		kg-cm/cm	
IZOD Impact Strength, 3.2mm (Notched)	23℃	ASTM D256	kg-cm/cm	
	-30℃		kg-cm/cm	
Rockwell Hardness	R-Scale	ASTM D785	-	120
Thermal				
Melting Temperature		ASTM D3418	℃	220
Heat Deflection Temperature, 6.4mm (Unannealed)	18.6kg	ASTM D648	℃	60
	4.6kg		℃	170
Coefficient of Linear Thermal Expansion		ASTM D696		
	Flow		10 ⁻⁵ m/m℃	8
Cross-flow			10 ⁻⁵ m/m℃	
Flammability		UL94		
	1.5mm		class	V-2
3.0mm	class	V-2		

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 molded specimens and after 48 hours storage at 23℃, 50% relative humidity.

Updated : 24-Feb-20

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Electrical

Property	Condition	Standard	Unit	Value
Surface Resistivity		IEC 60093	Ohm	
Volume Resistivity	23°C	ASTM D257	Ohm-cm	1.0E+15
Arc Resistance	23°C	ASTM D495	sec	195
Dielectric Strength, 1mm	23°C	ASTM D149	kV/mm	19
Dielectric Constant (10 ⁶ Hz)	23°C	ASTM D150		3

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Processing Guide (Injection Molding)

Processing Parameters	Unit	Value	
Drying Temperature	°C	80 ~ 100	
Drying Time	hrs	4 ~ 5	
Minimum Moisture Content	%		
Melt Temperature	°C	240 ~ 270	
Cylinder Temperature	Rear	°C	225 ~ 245
	Middle	°C	230 ~ 260
	Front	°C	240 ~ 270
Nozzle Temperature	°C	240 ~ 270	
Mold Temperature	°C	60 ~ 80	
Back Pressure	kg/cm ²		
Screw Speed	rpm		

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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