

# LUPOL GP1009F

Injection Molding, PP

## Description

General Purpose, Flame Retardant

## Application

IT/OA, Electrical&Electronic

Properties	Test Condition	Test Method	Unit	Typical Value
<b>Physical</b>				
Specific Gravity		ASTM D792	-	1.02
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	1.6~1.8
Melt Flow Rate	230°C/2.16kg	ASTM D1238	g/10min	19
<b>Mechanical</b>				
Tensile Strength, 3.2mm		ASTM D638		
@ Yield	50mm/min		kg/cm <sup>2</sup>	310
Tensile Elongation, 3.2mm		ASTM D638		
@ Yield	50mm/min		%	
@ Break	50mm/min		%	100
Tensile Modulus, 3.2mm	50mm/min	ASTM D638	kg/cm <sup>2</sup>	-
Flexural Strength, 6.4mm	10mm/min	ASTM D790	kg/cm <sup>2</sup>	400
Flexural Modulus, 6.4mm	10mm/min	ASTM D790	kg/cm <sup>2</sup>	14,000
IZOD Impact Strength, 6.4mm (Notched)		ASTM D256		
	23°C		kg-cm/cm	3
	-30°C		kg-cm/cm	
Rockwell Hardness	R-Scale	ASTM D785	-	
<b>Thermal</b>				
Melt Temperature @ Break		ASTM D3418	°C	-
Heat Deflection Temperature (Unannealed)		ASTM D648		
	4.6kg		°C	105
Vicat Softening Temperature		ASTM D1525		
	5kg, 50°C/h		°C	
Ball Pressure Temperature		IEC 60695-10-2	°C	
Burning Rate, 3.2mm		FMVSS 302	mm	
Flammability		UL94		
0.75mm			class	V-0
1.5mm			class	V-0
3.0mm			class	V-0
Relative Temperature Index		UL 746B		
Electrical			°C	120
Mechanical with Impact			°C	115
Mechanical without Impact			°C	115

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°C, 50% relative humidity.

Updated : Oct-24, 2012

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## Electrical

Property	Condition	Standard	Unit
Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts
Surface Resistivity		IEC 60093	Ohm
Volume Resistivity	23°C	ASTM D257	Ohm·m
Arc Resistance	23°C	ASTM D495	Ohm·cm
Dielectric Strength, 1mm	23°C	ASTM D149	kV/mm
Dielectric Constant (10 <sup>6</sup> Hz)	23°C	ASTM D150	sec

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## Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		°C	70~80
Drying Time		hrs	3~4
Minimum Moisture Content		%	0.01
Melt Temperature		°C	200~230
Cylinder Temperature	Rear	°C	190~210
	Middle	°C	200~230
	Front	°C	200~230
Nozzle Temperature		°C	210~230
Mold Temperature		°C	40~60
Back Pressure		kg/cm <sup>2</sup>	10~30
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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