

# LUPOY GP5006BH

Injection Molding, PC/ABS

## Description

Heat Resistance, Impact Strength, High Toughness

## Application

Helmet

Properties	Test Condition	Test Method	Unit	Typical Value
<b>Physical</b>				
Specific Gravity		ASTM D792	-	1.14
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.5~0.8
Melt Flow Rate	250 °C/2.16kg	ASTM D1238	g/10min	3.3
<b>Mechanical</b>				
Tensile Strength, 3.2mm		ASTM D638		
@ Yield	50mm/min		kg/cm <sup>2</sup>	580
Tensile Elongation, 3.2mm		ASTM D638		
@ Yield	50mm/min		%	
@ Break	50mm/min		%	>100
Flexural Strength, 3.2mm	10mm/min	ASTM D790	kg/cm <sup>2</sup>	930
Flexural Modulus, 3.2mm	10mm/min	ASTM D790	kg/cm <sup>2</sup>	23,000
IZOD Impact Strength, 3.2mm (Notched)		ASTM D256		
	23 °C		kg-cm/cm	72
	-30 °C		kg-cm/cm	55
Rockwell Hardness	R-Scale	ASTM D785	-	
<b>Thermal</b>				
Heat Deflection Temperature, 6.4mm (Unannealed)		ASTM D648		
	18.6kg		°C	116
	4.6kg		°C	
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		
0.8mm			class	
1.6mm			class	
2.5mm			class	
3.0mm			class	
Relative Temperature Index		UL 746B		
Electrical			°C	
Mechanical with Impact			°C	
Mechanical without Impact			°C	

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 moulded specimens and after 48 hours storage at 23°C, 50% relative humidity.

Updated : Nov-09, 2009

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## Electrical

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	80~100
Drying Time		hrs	4~6
Minimum Moisture Content		%	0.02
Melt Temperature		°C	250 ~ 275
Cylinder Temperature	Rear	°C	240 ~ 270
	Middle	°C	245 ~ 275
	Front	°C	245 ~ 275
Nozzle Temperature		°C	245 ~ 275
Mold Temperature		°C	50 ~ 70
Back Pressure		kg/cm <sup>2</sup>	
Screw Speed		rpm	40 ~ 70

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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