

LUCEL FW700S

Injection Molding, Modified POM

Description

Friction Resistance, Abrasion Resistance

Application

Gears, Printer Roller Pumps, Gear Worm Wheels

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.4
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	2.0 ~ 2.2
Melt Flow Rate	190 °C/2.16kg	ASTM D1238	g/10min	10
Mechanical				
Tensile Strength, 3.2mm		ASTM D638		
@ Yield	50mm/min		kg/cm ²	550
Tensile Elongation, 3.2mm		ASTM D638		
@ Break	50mm/min		%	70
Flexural Strength, 3.2mm	1.3mm/min	ASTM D790	kg/cm ²	800
Flexural Modulus, 3.2mm	1.3mm/min	ASTM D790	kg/cm ²	24,000
IZOD Impact Strength, 6.4mm (Notched)	23 °C	ASTM D256	kg·cm/cm	9.0
Rockwell Hardness	R-Scale	ASTM D785	-	80
Thermal				
Heat Deflection Temperature, 6.4mm (Unannealed)		ASTM D648		
	18.6kg		°C	105
	4.6kg		°C	155
Flammability		UL94		
0.95mm			class	HB
1.6mm			class	
2.5mm			class	
3.2mm			class	
Electrical				
Dissipation Factor		IEC 60250		
	1MHz		10 ⁻⁴	
Surface Resistivity		ASTM D257	Ohm	1*10 ¹⁴
Volume Resistivity	23 °C	ASTM D257	Ohm·cm	1*10 ¹⁶
Dielectric Strength, 1mm	23 °C	ASTM D149	kV/mm	

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.

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Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		°C	90 ~ 110
Drying Time		hrs	2 ~ 3
Minimum Moisture Content		%	0.1
Melt Temperature		°C	200 ~ 220
Cylinder Temperature	Rear	°C	160 ~ 180
	Middle	°C	170 ~ 190
	Front	°C	180 ~ 200
Nozzle Temperature		°C	180 ~ 200
Mold Temperature		°C	80 ~ 110
Back Pressure		kg/cm ²	5 ~ 31
Screw Speed		rpm	50 ~ 100

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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