

Iupilon® CLS1000

Polycarbonate

Mitsubishi Engineering-Plastics Corp

Message:

Iupilon®CLS1000 is a polycarbonate (PC) material. This product is available in North America, Europe or Asia Pacific region. The processing method is injection molding.

Iupilon®The main features of the CLS1000 are:

- high viscosity
- UV stability

Typical application areas include:

- optics/lens
- medical/health care

General Information			
Additive	UV stabilizer		
Features	Viscosity, High		
Uses	Lens		
	Glasses		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.3	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	5.00	cm ³ /10min	ISO 1133
Molding Shrinkage			
Vertical flow direction: 3.20mm	0.50 - 0.70	%	
Flow direction: 3.20mm	0.50 - 0.70	%	
Water Absorption (Saturation, 23°C)	0.24	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2
Tensile Stress (Yield)	60.0	MPa	ISO 527-2
Tensile Strain (Yield)	5.4	%	ISO 527-2
Nominal Tensile Strain at Break	110	%	ISO 527-2
Flexural Modulus	2300	MPa	ISO 178
Flexural Stress	93.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	88	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	145	°C	ISO 75-2/B

1.8 MPa, not annealed	131	°C	ISO 75-2/A
Linear thermal expansion coefficient			ISO 11359-2
Flow	6.5E-5	cm/cm/°C	ISO 11359-2
Lateral	6.6E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	6.0E+15	ohms	IEC 60093
Volume Resistivity	3.0E+16	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
1.00 mm	31	kV/mm	IEC 60243-1
3.00 mm	18	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.10		IEC 60250
1 MHz	3.10		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	6.0E-4		IEC 60250
1 MHz	9.0E-3		IEC 60250
Additional Information			
Cut UV of under 380nm at 3mmt			
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0 - 8.0	hr	
Rear Temperature	260 - 280	°C	
Middle Temperature	270 - 290	°C	
Front Temperature	270 - 300	°C	
Nozzle Temperature	270 - 300	°C	
Mold Temperature	80.0 - 120	°C	
Injection Pressure	50.0 - 150	MPa	
Screw Speed	50 - 100	rpm	

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