

Iupilon® FPR4500

Polycarbonate

Mitsubishi Engineering-Plastics Corp

Message:

Iupilon® FPR4500 is a Polycarbonate (PC) material. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of Iupilon® FPR4500 are:

Flame Rated

Flame Retardant

High Flow

General Information			
UL YellowCard	E41179-231860		
Additive	Flame Retardant		
Features	Flame Retardant		
	High Flow		
Appearance	Opaque		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	27	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	26.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Across Flow : 3.20 mm	0.30 to 0.50	%	
Flow : 3.20 mm	0.30 to 0.50	%	
Water Absorption (Saturation, 23°C)	0.24	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2600	MPa	ISO 527-2
Tensile Stress (Yield)	63.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.2	%	ISO 527-2
Nominal Tensile Strain at Break	72	%	ISO 527-2
Flexural Modulus	2700	MPa	ISO 178
Flexural Stress	97.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	40	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, Unannealed	105	°C	ISO 75-2/B
1.8 MPa, Unannealed	94.0	°C	ISO 75-2/A

CLTE			ISO 11359-2
Flow	6.6E-5	cm/cm/°C	
Transverse	6.7E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	31	kV/mm	
3.00 mm	18	kV/mm	
Relative Permittivity			IEC 60250
100 Hz	3.10		
1 MHz	3.10		
Dissipation Factor			IEC 60250
100 Hz	3.4E-3		
1 MHz	7.1E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.400 mm	V-2		
0.800 mm	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	4.0 to 8.0	hr	
Rear Temperature	230 to 280	°C	
Middle Temperature	240 to 290	°C	
Front Temperature	250 to 300	°C	
Nozzle Temperature	250 to 300	°C	
Mold Temperature	60.0 to 90.0	°C	
Injection Pressure	50.0 to 200	MPa	
Screw Speed	50 to 150	rpm	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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