

Lupoy® GP5106F

Polycarbonate + ABS

LG Chem Ltd.

Message:

Description

Flame Retardance

Application

IT/OA(Housing)

General Information		
UL YellowCard	E248280-322219	E353371-101107250
Filler / Reinforcement	Glass Fiber,10% Filler by Weight	
Additive	Flame Retardant	
Features	Flame Retardant	
Uses	Computer Components	
	Electrical Parts	
	Electrical/Electronic Applications	

Processing Method	Injection Molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)
	Secant Modulus vs. Strain (ISO 11403-1)
	Specific Heat vs. Temperature (ISO 11403-2)
	Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm ³	ASTM D792
--	1240	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Melt volume-flow rate (260°C/5.0 kg)	26.2	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.40	%	ASTM D955
Water Absorption (Saturation)	0.11	%	ISO 62 ³

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile modulus	4000	MPa	ISO 527-2 ⁴
Tensile Strength			
Yield, 3.20 mm ⁵	65.7	MPa	ASTM D638
Break	77.0	MPa	ISO 527-2 ⁶
Tensile Elongation			

Break, 3.20 mm ⁷	7.0	%	ASTM D638
Break	3.4	%	ISO 527-2 ⁸
Flexural Modulus ⁹ (3.20 mm)	3920	MPa	ASTM D790
Flexural Strength ¹⁰ (3.20 mm)	108	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength			ISO 179/1eA ¹¹
-30°C	4.90	kJ/m ²	
23°C	6.80	kJ/m ²	
Charpy impact strength			ISO 179/1eU ¹²
-30°C	29.5	kJ/m ²	
23°C	35.4	kJ/m ²	
Notched Izod Impact (23°C, 3.20 mm)	69	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa	125	°C	ISO 75-2 ¹³
1.8 MPa, Unannealed, 6.40 mm	113	°C	ASTM D648
1.8 MPa	109	°C	ISO 75-2 ¹⁴
Glass Transition Temperature ¹⁵	140	°C	ISO 11357-2 ¹⁶
Vicat Softening Temperature (50°C/h, B (50N))	117	°C	ISO 306 ¹⁷
CLTE			ISO 11359-2 ¹⁸
Flow	4.5E-5	cm/cm/°C	
Transverse	7.8E-5	cm/cm/°C	
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI Str	60.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface resistivity	> 1.0E+15	ohms	IEC 60093 ¹⁹
Volume resistivity	> 1.0E+13	ohms·m	IEC 60093 ²⁰
Electric strength	29	kV/mm	IEC 60243-1 ²¹
Relative Permittivity (1 MHz)	3.10		IEC 60250 ²²
Dissipation Factor (1 MHz)	0.010		IEC 60250 ²³
Comparative tracking index	200		IEC 60112 ²⁴
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.70 mm	V-0		
3.00 mm	V-0		
Burning Behav. at thickness h (1.70 mm, UL)	V-0		ISO 1210 ²⁵
Injection	Nominal Value	Unit	
Drying Temperature	75.0 to 85.0	°C	
Drying Time	3.0 to 5.0	hr	
Suggested Max Moisture	< 0.020	%	

Rear Temperature	220 to 240	°C
Middle Temperature	235 to 255	°C
Front Temperature	250 to 265	°C
Nozzle Temperature	250 to 265	°C
Processing (Melt) Temp	235 to 265	°C
Mold Temperature	50.0 to 80.0	°C
Back Pressure	0.0196 to 0.0588	MPa
Screw Speed	40 to 70	rpm

NOTE

1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	5.0 mm/min
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	5.0 mm/min
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	1.3 mm/min
10.	1.3 mm/min
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	10 °C/min
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
21.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
22.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
23.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
24.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
25.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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