

LG Chemical® TR580

Transparency, Chemical Resistance
Applications: Chemical Resistance

Information provided by LG Chemical

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in ³	ASTM D792
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm @Thickness 3.20 mm	0.0040 - 0.0070 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	2.5 g/10 min @Load 10.0 kg, Temperature 220 °C	2.5 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	39.0 MPa @Thickness 3.20 mm	5660 psi @Thickness 0.126 in	50 mm/min; ASTM D638
Elongation at Break	15 % @Thickness 3.20 mm	15 % @Thickness 0.126 in	50 mm/min; ASTM D638
Tensile Modulus	1.60 GPa @Thickness 3.20 mm	232 ksi @Thickness 0.126 in	50 mm/min; ASTM D638
Flexural Strength	64.0 MPa @Thickness 3.20 mm	9280 psi @Thickness 0.126 in	15 mm/min; ASTM D790
Flexural Modulus	1.80 GPa @Thickness 3.20 mm	262 ksi @Thickness 0.126 in	15 mm/min; ASTM D790
Izod Impact, Notched	0.200 J/cm @Thickness 3.20 mm, Temperature -30.0 °C	0.375 ft-lb/in @Thickness 0.126 in, Temperature -22.0 °F	ASTM D256
	0.200 J/cm @Thickness 6.40 mm, Temperature -30.0 °C	0.375 ft-lb/in @Thickness 0.252 in, Temperature -22.0 °F	ASTM D256
	0.800 J/cm @Thickness 3.20 mm, Temperature 23.0 °C	1.50 ft-lb/in @Thickness 0.126 in, Temperature 73.4 °F	ASTM D256
	0.800 J/cm @Thickness 6.40 mm, Temperature 23.0 °C	1.50 ft-lb/in @Thickness 0.252 in, Temperature 73.4 °F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	79.0 °C @Thickness 6.40 mm	174 °F @Thickness 0.252 in	Unannealed, Edgewise; ASTM D648

Vicat Softening Point	87.0 °C @Load 5.00 kg	189 °F @Load 11.0 lb	50°C/h; ASTM D1525
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Optical Properties	Metric	English	Comments
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Haze	1.2 %	1.2 %	ASTM D1003
Transmission, Visible	90 % @Thickness 3.20 mm	90 % @Thickness 0.126 in	ASTM D1003
Processing Properties	Metric	English	Comments
Rear Barrel Temperature	210 - 230 °C	410 - 446 °F	
Middle Barrel Temperature	220 - 240 °C	428 - 464 °F	
Front Barrel Temperature	230 - 250 °C	446 - 482 °F	
Nozzle Temperature	230 - 260 °C	446 - 500 °F	
Melt Temperature	220 - 250 °C	428 - 482 °F	
Mold Temperature	50.0 - 70.0 °C	122 - 158 °F	
Drying Temperature	80.0 - 90.0 °C @Time 7200 - 14400 sec	176 - 194 °F @Time 2.00 - 4.00 hour	
Moisture Content	>= 0.010 %	>= 0.010 %	
Back Pressure	2.94 - 5.88 MPa	426 - 853 psi	
Screw Speed	30 - 80 rpm	30 - 80 rpm	