

Technical Data Sheet

Perlex R5563

Polycarbonate
LyondellBasell Industries
Engineering Plastics

General		
Additive	• Flame Retardant	• UV Stabilizer
Features	• Flame Retardant	• UV Resistant
Uses	• Electrical Parts	
Appearance	• Opaque	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 Kg)	12 g/10 min	12 g/10 min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-1
Tensile Stress			ISO 527-2
Yield	8700 psi	60.0 MPa	
Break	6960 psi	48.0 MPa	
Tensile Strain			ISO 527-2
Yield	5.0 %	5.0 %	
Break	> 50 %	> 50 %	
Flexural Modulus	348000 psi	2400 MPa	ISO 178
Flexural Stress	13800 psi	95.0 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F (-30°C)	5.2 ft·lb/in ²	11 kJ/m ²	
73°F (23°C)	22 ft·lb/in ²	47 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Notched Izod Impact (Area) (73°F (23°C))	21.4 ft·lb/in ²	45.0 kJ/m ²	ASTM D256

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	275 °F	135 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed	266 °F	130 °C	ISO 75-2/A
Vicat Softening Temperature			
--	293 °F	145 °C	ISO 306/B50
--	302 °F	150 °C	ISO 306/A50
RTI Elec			UL 746B
0.06 In (1.5 Mm)	176 °F	80.0 °C	
0.12 In (3.0 Mm)	176 °F	80.0 °C	
RTI Imp			UL 746B
0.06 In (1.5 Mm)	176 °F	80.0 °C	
0.12 In (3.0 Mm)	176 °F	80.0 °C	
RTI Str			UL 746B
0.06 In (1.5 Mm)	176 °F	80.0 °C	
0.12 In (3.0 Mm)	176 °F	80.0 °C	

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Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	175 V	175 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746A
0.06 In (1.5 Mm)	PLC 0	PLC 0	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746A
0.06 In (1.5 Mm)	PLC 2	PLC 2	
0.12 In (3.0 Mm)	PLC 1	PLC 1	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 In (2.00 Mm)	0.0 in/min	0.0 mm/min	ISO 3795
0.0787 In (2.00 Mm)	0.0 in/min	0.0 mm/min	FMVSS 302
Flame Rating			UL 94
0.06 In (1.5 Mm)	V-0	V-0	
0.12 In (3.0 Mm)	V-0	V-0	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 In (1.5 Mm)	1760 °F	960 °C	
0.12 In (3.0 Mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 In (1.5 Mm)	1560 °F	850 °C	
0.12 In (3.0 Mm)	1560 °F	850 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	230 to 248 °F	110 to 120 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	518 to 590 °F	270 to 310 °C
Mold Temperature	122 to 176 °F	50 to 80 °C

Notes

These are typical property values not to be construed as specification limits.