Technical Data Sheet

POLYFLAM® RPC 40400

Polycarbonate
Engineering Plastics

Product Description		
Flame retardant PC; halogen free according to DIN VDE 0472 part 815		
General		
Features	• Flame Retardant	• Halogen Free
UL File Number	• E86615	
Processing Method	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm³	1.18 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	25 cm³/10min	25 cm³/10min	ISO 1133
Molding Shrinkage	0.30 to 0.50 %	0.30 to 0.50 %	ISO 294-4
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	348000 psi	2400 MPa	ISO 527-2/1A/1
Tensile Stress (Yield)	8700 psi	60.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	5.0 %	5.0 %	ISO 527-2/1A/50
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	9.5 ft·lb/in²	20 kJ/m²	
73°F (23°C)	29 ft·lb/in²	60 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	217 °F	103 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	203 °F	95.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	239 °F	115 °C	ISO 306/A50
--	230 °F	110 °C	ISO 306/B50
Ball Pressure Test (221°F (105°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746
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 746
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 746
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	225 V	225 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
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 746
0.06 in (1.5 mm)	PLC 3	PLC 3	
0.12 in (3.0 mm)	PLC 2	PLC 2	
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate			
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	ISO 3795
Flame Rating			UL 94
0.06 in (1.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
0.14 in (3.5 mm)	• V-0 • 5VA	• V-0 • 5VA	
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)	1430 °F	775 °C	
Oxygen Index	33 %	33 %	ASTM D2863

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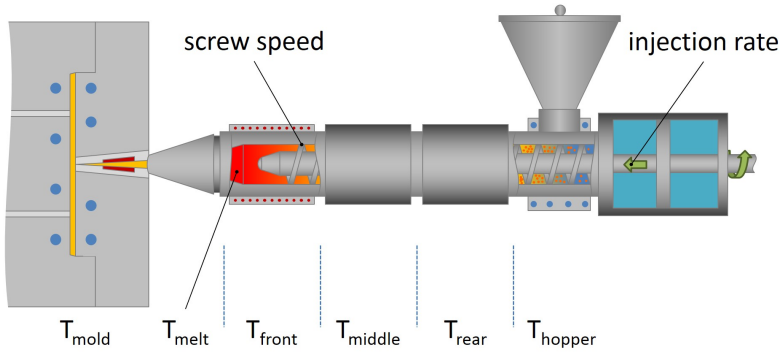

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	212 to 248 °F	100 to 120 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.02 %	0.02 %
Suggested Max Regrind	25 %	25 %
Processing (Melt) Temp	500 to 518 °F	260 to 270 °C
Mold Temperature	122 to 176 °F	50 to 80 °C
Injection Rate	Moderate-Fast	Moderate-Fast
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Screw Speed	< 591 in/min	< 15 m/min

Notes

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