Technical Data Sheet

POLYFLAM® RPP 2000

Polypropylene Homopolymer
Engineering Plastics

Product Description			
Unfilled flame-retardant PP compound; halogen free according to DIN VDE 0472 part 815			
General			
Features	• Flame Retardant • Good Color Stability	• Good Processability • Halogen Free	• Homopolymer
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PP FR(40)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm³	0.910 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	8.00 cm³/10min	8.00 cm³/10min	ISO 1133
Molding Shrinkage	1.1 to 1.3 %	1.1 to 1.3 %	ISO 294-4
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	261000 psi	1800 MPa	ISO 527-2/1A/1
Tensile Stress (Yield)	5510 psi	38.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	8.0 %	8.0 %	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)	1.4 ft·lb/in²	3.0 kJ/m²	
73°F (23°C)	3.3 ft·lb/in²	7.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	8.1 ft·lb/in²	17 kJ/m²	
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	216 °F	102 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	138 °F	59.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	315 °F	157 °C	ISO 306/A50
--	207 °F	97.0 °C	ISO 306/B50
Ball Pressure Test (293°F (145°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746
0.030 in (0.75 mm)	149 °F	65.0 °C	
0.06 in (1.5 mm)	149 °F	65.0 °C	
0.12 in (3.0 mm)	149 °F	65.0 °C	
RTI Imp			UL 746
0.030 in (0.75 mm)	149 °F	65.0 °C	
0.06 in (1.5 mm)	149 °F	65.0 °C	
0.12 in (3.0 mm)	149 °F	65.0 °C	
RTI Str			UL 746
0.030 in (0.75 mm)	149 °F	65.0 °C	
0.06 in (1.5 mm)	149 °F	65.0 °C	
0.12 in (3.0 mm)	149 °F	65.0 °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	600 V	600 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.030 in (0.75 mm)	PLC 0	PLC 0	
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
0.030 in (0.75 mm)	PLC 4	PLC 4	
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	ISO 3795
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
Flame Rating			UL 94 IEC 60695-11-10, -20
0.030 in (0.75 mm)	V-2	V-2	
0.06 in (1.5 mm)	V-2	V-2	
0.12 in (3.0 mm)	V-2	V-2	
Glow Wire Flammability Index			IEC 60695-2-12
0.030 in (0.75 mm)	1760 °F	960 °C	
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
0.030 in (0.75 mm)	1610 °F	875 °C	
0.06 in (1.5 mm)	1560 °F	850 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Oxygen Index	27 %	27 %	ISO 4589-2

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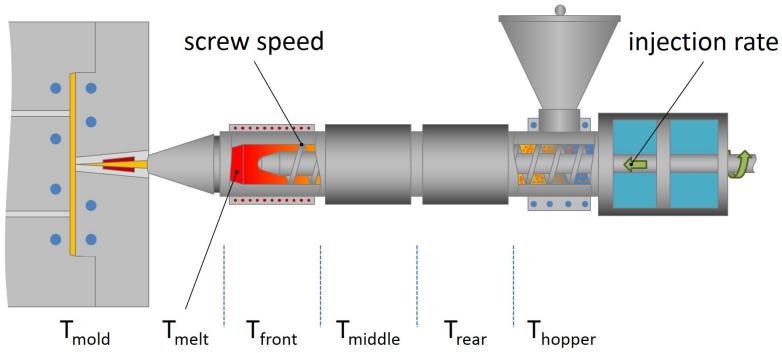

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 to 176 °F	70 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Rear Temperature	356 °F	180 °C
Middle Temperature	392 °F	200 °C
Front Temperature	410 °F	210 °C
Nozzle Temperature	428 °F	220 °C
Processing (Melt) Temp	356 to 410 °F	180 to 210 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Pressure	11600 to 17400 psi	80.0 to 120 MPa
Injection Rate	Slow-Moderate	Slow-Moderate
Holding Pressure	5800 to 13100 psi	40.0 to 90.0 MPa
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Cushion	< 0.197 in	< 5.00 mm
Screw Speed	< 709 in/min	< 18 m/min

Notes

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