

Technical Data Sheet

Polyflam RPP 490 CS1

Polypropylene Homopolymer
LyondellBasell Industries
Engineering Plastics

Product Description

Flame-retardant PP-homopolymer; halogen free

General

Features	<ul style="list-style-type: none"> Copper Contact Stabilized Flame Retardant 	<ul style="list-style-type: none"> Halogen Free Homopolymer
UL File Number	E86615	
Processing Method	Injection Molding	
Resin ID (ISO 1043)	PP FR(51)	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.06 g/cm ³	1.06 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 Kg)	10 cm ³ /10min	10 cm ³ /10min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	348000 psi	2400 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	3770 psi	26.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	3.0 %	3.0 %	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)	0.71 ft·lb/in ²	1.5 kJ/m ²	
73°F (23°C)	0.95 ft·lb/in ²	2.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	4.8 ft·lb/in ²	10 kJ/m ²	
73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	221 °F	105 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	140 °F	60.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	208 °F	98.0 °C	ISO 306/B50
--	304 °F	151 °C	ISO 306/A50
Ball Pressure Test (284°F (140°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
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 746B
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 746B
0.06 In (1.5 Mm)	149 °F	65.0 °C	
0.12 In (3.0 Mm)	149 °F	65.0 °C	

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

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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	IEC 60695-11-10, -20
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)	1380 °F	750 °C	
0.12 In (3.0 Mm)	1380 °F	750 °C	
Oxygen Index	37 %	37 %	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 428 °F	180 to 220 °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.