HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

Technical Data Sheet

POLYFLAM® RPP 490 CS1 K2054

Polypropylene Homopolymer
Engineering Plastics

Product Description	
Flame-retardant PP-homopolymer; halogen free	

General		
Features	• Copper Contact Stabilized • Flame Retardant	• Halogen Free • Homopolymer
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PP FR(51)	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.06 g/cm³	1.06 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	23 cm³/10min	23 cm³/10min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	348000 psi	2400 MPa	ISO 527-2/1A/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/in²	1.5 kJ/m²	
73°F (23°C)	0.95 ft·lb/in²	2.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	4.8 ft·lb/in²	10 kJ/m²	
73°F (23°C)	9.5 ft·lb/in²	20 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
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			
--	304 °F	151 °C	ISO 306/A50
--	208 °F	98.0 °C	ISO 306/B50
Ball Pressure Test (284°F (140°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746
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
0.06 in (1.5 mm)	149 °F	65.0 °C	
0.12 in (3.0 mm)	149 °F	65.0 °C	
RTI Str			UL 746
0.06 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**
Comparative Tracking Index	600 V	600 V	IEC 60112
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate			ISO 3795
0.0591 in (1.50 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	
0.118 in (3.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	

HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

Technical Data Sheet

POLYFLAM® RPP 490 CS1 K2054

Polypropylene Homopolymer
Engineering Plastics

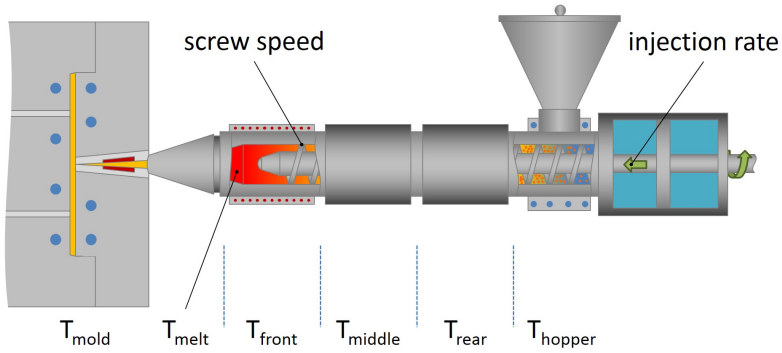
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			
0.031 in (0.8 mm)	V-2	V-2	UL 94
0.06 in (1.5 mm)	V-0	V-0	UL 94 IEC 60695-11-10, -20
0.12 in (3.0 mm)	V-0	V-0	UL 94 IEC 60695-11-10, -20
0.03 in (0.8 mm)	V-2	V-2	IEC 60695-11-10, -20
Glow Wire Flammability Index			IEC 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)	1520 °F	825 °C	
0.12 in (3.0 mm)	1520 °F	825 °C	
Oxygen Index	39 %	39 %	ISO 4589-2

HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

Technical Data Sheet

POLYFLAM® RPP 490 CS1 K2054

Polypropylene Homopolymer
Engineering Plastics



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.