Technical Data Sheet

Polyflam RPP 4225 CS1

Polypropylene Homopolymer
LyondellBasell Industries
Engineering Plastics

Product Description
25% glass fibre reinforced flame-retardant PP-Homopolymer; halogen free

General			
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight		
Features	• Copper Contact Stabilized • Flame Retardant	• Halogen Free • High Strength	• Homopolymer • Low Density
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PP GF25 FR(51)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.26 g/cm³	1.26 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR)			ISO 1133
230°c/2.16 Kg	4.0 cm³/10min	4.0 cm³/10min	
230°c/5.0 Kg	12 cm³/10min	12 cm³/10min	
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	1.06E+6 psi	7300 MPa	ISO 527-1/1A/1
Tensile Stress (Break)	11600 psi	80.0 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.0 %	3.0 %	ISO 527-2/1A/5
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°f (-30°c)	4.0 ft·lb/in²	8.5 kJ/m²	
73°f (23°c)	4.3 ft·lb/in²	9.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°f (-30°c)	16 ft·lb/in²	33 kJ/m²	
73°f (23°c)	18 ft·lb/in²	38 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	315 °F	157 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	291 °F	144 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	279 °F	137 °C	ISO 306/B50
--	327 °F	164 °C	ISO 306/A50
Ball Pressure Test (311°f (155°c))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
0.06 In (1.6 Mm)	149 °F	65.0 °C	
0.12 In (3.0 Mm)	149 °F	65.0 °C	
RTI Imp			UL 746B
0.06 In (1.6 Mm)	149 °F	65.0 °C	
0.12 In (3.0 Mm)	149 °F	65.0 °C	
RTI Str			UL 746B
0.06 In (1.6 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
Electric Strength [1]			IEC 60243-1
73°f (23°c), 0.0394 In (1.00 Mm), In Oil	970 V/mil	38 kV/mm	
Comparative Tracking Index	600 V	600 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746A
0.06 In (1.6 Mm)	PLC 0	PLC 0	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746A
0.06 In (1.6 Mm)	PLC 0	PLC 0	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
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			
0.031 In (0.8 Mm)	V-2	V-2	UL 94
0.06 In (1.6 Mm)	V-0	V-0	UL 94 IEC 60695-11-10, -20
0.12 In (3.0 Mm)	• V-0 • 5VA	• V-0 • 5VA	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)	1560 °F	850 °C	
0.12 In (3.0 Mm)	1560 °F	850 °C	
Oxygen Index	44 %	44 %	ISO 4589-2

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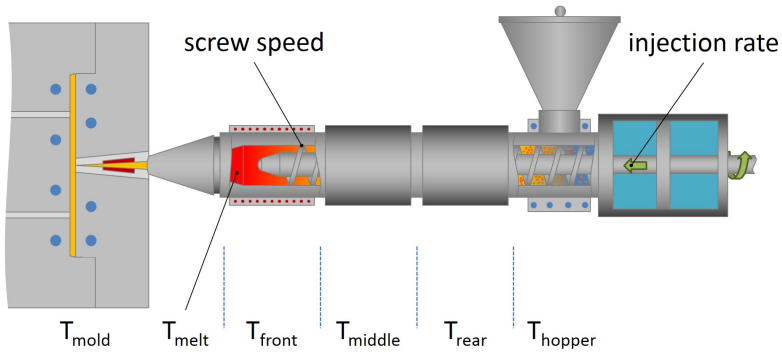

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 to 176 °F	70 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Rear Temperature	356 °F	180 °C
Middle Temperature	392 °F	200 °C
Front Temperature	410 °F	210 °C
Nozzle Temperature	428 °F	220 °C
Processing (Melt) Temp	392 to 446 °F	200 to 230 °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