

Technical Data Sheet



Polyflam RPP 500 D

Polypropylene Homopolymer
LyondellBasell Industries
Engineering Plastics

Product Description

Flame retardant PP-homopolymer - standard grade without PBDE

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant		
Features	• Flame Retardant	• Homopolymer	
UL File Number	• E86615		
Processing Method	• Injection Molding		
Part Marking Code (ISO 1043)	• >PP FR(17)<		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 g/cm ³	0.940 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
Water Absorption Equilibrium, 73°F (23°C), 50% RH	0.13 %	0.13 %	ISO 62
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	203000 psi	1400 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	4060 psi	28.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	10 %	10 %	ISO 527-2/1A/50
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength -22°F (-30°C) 73°F (23°C)	1.1 ft·lb/in ² 2.4 ft·lb/in ²	2.3 kJ/m ² 5.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength -22°F (-30°C) 73°F (23°C)	8.8 ft·lb/in ² No Break	19 kJ/m ² No Break	ISO 179/1eU
Notched Izod Impact (Area) (73°F (23°C))	1.90 ft·lb/in ²	4.00 kJ/m ²	ASTM D256
Notched Izod Impact Strength -40°F (-40°C) 73°F (23°C)	1.2 ft·lb/in ² 1.9 ft·lb/in ²	2.5 kJ/m ² 4.0 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength -40°F (-40°C) 73°F (23°C)	6.9 ft·lb/in ² No Break	15 kJ/m ² No Break	ISO 180/1U
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	9430 psi	65.0 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed 264 psi (1.8 MPa), Unannealed	248 °F 185 °F	120 °C 85.0 °C	ISO 75-2/Bf ISO 75-2/Af
Vicat Softening Temperature -- --	201 °F 300 °F	94.0 °C 149 °C	ISO 306/B50 ISO 306/A120
Ball Pressure Test (266°F (130°C))	Pass	Pass	IEC 60695-10-2
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
Flammability Classification			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	
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.030 in (0.75 mm)	1380 °F	750 °C	
0.06 in (1.5 mm)	1340 °F	725 °C	
0.12 in (3.0 mm)	1340 °F	725 °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 428 °F	180 to 220 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Screw Speed	< 18 rpm	< 18 rpm
Cushion	< 0.197 in	< 5.00 mm

Injection Notes

Mould surface contacting melt should be of non-corrosive steel (content of chrome > 12%)

Notes

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

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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