

Technical Data Sheet



Polyflam RIPP 510 D

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

Product Description

Flame retardant PP-copolymer - grade without PBDE

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant		
Features	• Copolymer	• Flame Retardant	
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)	5.5 cm ³ /10min	5.5 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	160000 psi	1100 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	3340 psi	23.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	12 %	12 %	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/in ²	3.0 kJ/m ²	
73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	29 ft·lb/in ²	60 kJ/m ²	
73°F (23°C)	No Break	No Break	
Notched Izod Impact (Area) (73°F (23°C))	4.76 ft·lb/in ²	10.0 kJ/m ²	ASTM D256
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	2.1 ft·lb/in ²	4.5 kJ/m ²	
73°F (23°C)	3.3 ft·lb/in ²	7.0 kJ/m ²	
Unnotched Izod Impact Strength			ISO 180/1U
-40°F (-40°C)	21 ft·lb/in ²	45 kJ/m ²	
73°F (23°C)	No Break	No Break	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	8990 psi	62.0 MPa	ISO 2039-1
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			
--	165 °F	74.0 °C	ISO 306/B50
--	288 °F	142 °C	ISO 306/A120
Ball Pressure Test (248°F (120°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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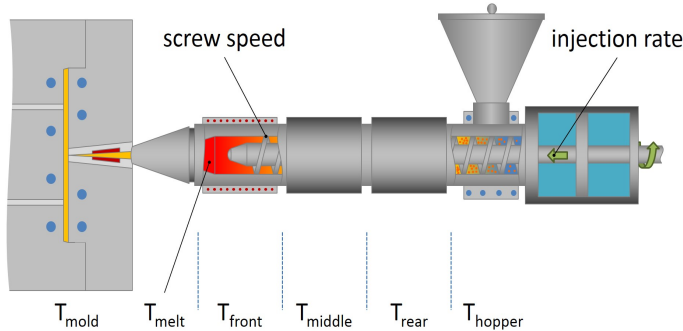
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.030 in (0.75 mm)	V-2	V-2	
0.06 in (1.5 mm)	V-2	V-2	
Glow Wire Flammability Index			IEC 60695-2-12
0.030 in (0.75 mm)	1760 °F	960 °C	
0.06 in (1.5 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.030 in (0.75 mm)	1290 °F	700 °C	
0.06 in (1.5 mm)	1250 °F	675 °C	
0.12 in (3.0 mm)	1250 °F	675 °C	
Oxygen Index	29 %	29 %	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

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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