

Technical Data Sheet

Polyflam RIPP 510 D

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

Product Description

Flame retardant PP-copolymer - grade without PBDE

General

Additive	• Flame Retardant
Features	• Copolymer • Flame Retardant
Processing Method	• Injection Molding
Part Marking Code (ISO 11469)	• >PP FR(<

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
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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
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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
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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
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Ball Indentation Hardness (H 358/30)	8990 psi	62.0 MPa	ISO 2039-1
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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
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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
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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.