

Technical Data Sheet



Polyflam RIPP 2000 S

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

Product Description

Unfilled flame retardant polypropylene copolymer compound, UV stabilized for outdoor applications (i.e. stadium seats), free of halogens according to DIN VDE 0472 part 815

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• UV Stabilizer		
Features	• Copolymer	• Flame Retardant	• Halogen Free
Uses	• Outdoor Applications	• Seats	
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PP FR(53)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm ³	0.910 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	13 cm ³ /10min	13 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)	3480 psi	24.0 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			ISO 179/1eA
-22°F (-30°C)	1.2 ft·lb/in ²	2.5 kJ/m ²	
73°F (23°C)	6.2 ft·lb/in ²	13 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	22 ft·lb/in ²	46 kJ/m ²	
73°F (23°C)	No Break	No Break	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	172 °F	78.0 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	127 °F	53.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	147 °F	64.0 °C	ISO 306/B50
--	286 °F	141 °C	ISO 306/A120
Ball Pressure Test (248°F (120°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
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 746B
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 746B
0.06 in (1.5 mm)	149 °F	65.0 °C	
0.12 in (3.0 mm)	149 °F	65.0 °C	

Technical Data Sheet



Polyflam RIPP 2000 S

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

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
High Amp Arc Ignition (HAI)			UL 746A
0.06 in (1.5 mm)	PLC 0	PLC 0	
0.12 in (3.0 mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746A
0.06 in (1.5 mm)	PLC 3	PLC 3	
0.12 in (3.0 mm)	PLC 2	PLC 2	
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	ISO 3795
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.03 in (0.8 mm)	V-2	V-2	
0.06 in (1.6 mm)	V-2	V-2	
0.13 in (3.2 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)	1560 °F	850 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Oxygen Index	26 %	26 %	ISO 4589-2

Technical Data Sheet



Polyflam RIPP 2000 S

Polypropylene Copolymer
LyondellBasell Industries
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	374 °F	190 °C
Front Temperature	392 °F	200 °C
Nozzle Temperature	410 °F	210 °C
Processing (Melt) Temp	356 to 410 °F	180 to 210 °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	4350 to 10200 psi	30.0 to 70.0 MPa
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa

Injection Notes

Screw Speed max. 0,25 m/s
Cushion small

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/>.

© LyondellBasell Industries Holdings, B.V. 2024

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Technical Data Sheet

**Polyflam RIPP 2000 S**

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.