Technical Data Sheet

Polyflam RPP 4000 NAT

Polypropylene, Homopolymer

Product Description

Unfilled flame-retardant PP-Homopolymer, halogen-free

Regulatory Status

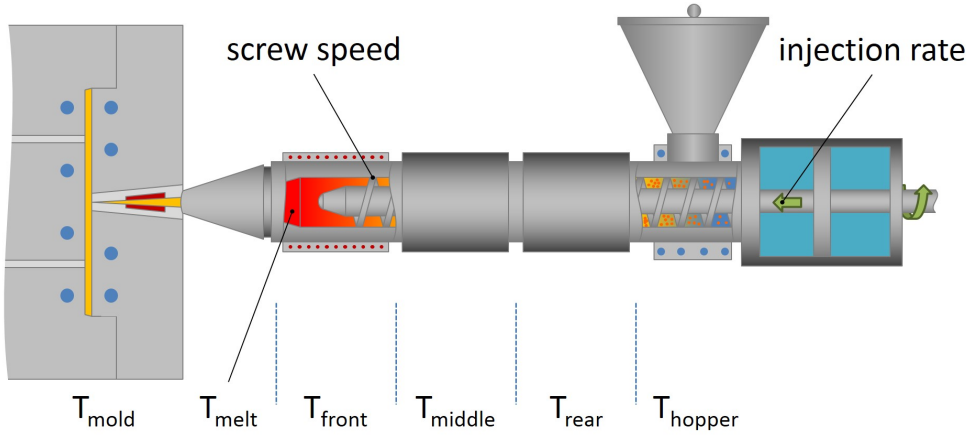
For regulatory compliance information, see *Polyflam* RPP 4000 NAT Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	Europe
Processing Method	Injection Molding
Attribute	Good Processability; Halogen Free; Homopolymer; UL Listed under File Numbers E86615 / E132739 / E31765
Additive	Flame Retardant
Resin ID	PP FR(51)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (230 °C/2.16 kg)	16	cm³/10 min	ISO 1133
Density, (Method A)	1.06	g/cm³	ISO 1183
Mechanical			
Tensile Modulus, (1 mm/min, Type 1A)	2600	MPa	ISO 527-1
Tensile Strain at Yield, (Type 1A, 50 mm/min)	3.3	%	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min, Type 1A)	15	%	ISO 527-2
Tensile Stress at Yield, (Type 1A, 50 mm/min)	25.0	MPa	ISO 527-2
Tensile Stress at Break, (Type 1A, 50 mm/min)	20.0	MPa	ISO 527-2
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	3.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	2.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	28	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	12	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (145 °C, 1.80 mm) (DIN EN 60695)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(A (10N), 50 °C/h)	153	°C	ISO 306
(B (50N), 50 °C/h)	101	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	106	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	59.0	°C	ISO 75-2/A
Electrical			

Manufacturer website: https://www.lyondellbasell.com/en/

Surface Resistivity	>1.0E+15	ohm	IEC 60093
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	600	V	IEC 60112
Flammable			
Burning Rate			
(2.00 mm, Self-Extinguishing)	0.0	mm/min	FMVSS 302
(2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	750	°C	IEC 60695-2-13
(1.5 mm)	725	°C	IEC 60695-2-13
(3.0 mm)	750	°C	IEC 60695-2-13
UL Information			
Flammability Classification			
(0.75 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(3.0 mm)	V-0		IEC 60695-11-10, -20
(3.0 mm)	5VA		IEC 60695-11-10, -20
UL File Number	E86615		



Injection Parameters	Nominal Value	Units
Drying Temperature	70 to 80	°C
Drying Time	2.0 to 4.0	hr
Processing (Melt) Temp	180 to 220	°C
Mold Temperature	40 to 80	°C
Screw Speed	<300	mm/sec
Holding Pressure	40.0 to 90.0	MPa
Back Pressure	5.00 to 10.0	MPa
Injection Pressure	80.0 to 120	MPa
Injection Rate	Slow-Moderate	

Notes

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

Processing notes

Melt contacting surfaces should be made of a high quality, corrosive resistant steel. Positive experiences have been made with steel qualities containing > 12% chromium.

Avoid processing at very barrel high temperatures or above the recommended melt temperature range as this can increase risk of deposit onto the tool surfaces. Avoid long residence times. At start and end of production, it is recommended to purge clean with non-flame retardant polymer or a polyolefin.

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.

Company Information

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

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