Technical Data Sheet

Polyflam RPP 500 D NAT

Polypropylene, Homopolymer

Product Description

Flame retardant PP-homopolymer - standard grade without PBDE

Regulatory Status

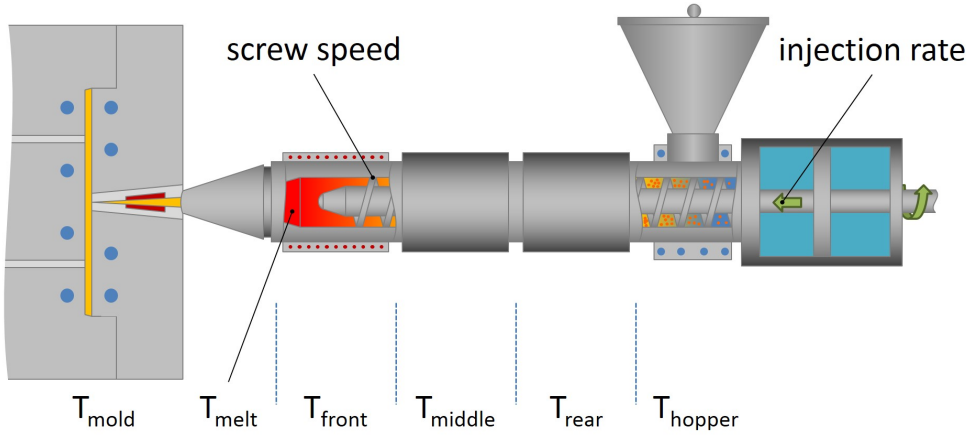
For regulatory compliance information, see *Polyflam* RPP 500 D NAT Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Processing Method	Injection Molding
Attribute	Homopolymer; UL Listed under File Numbers E86615 / E132739 / E31765
Additive	Flame Retardant

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (230 °C/2.16 kg)	10	cm³/10 min	ISO 1133
Density, (Method A)	0.940	g/cm³	ISO 1183
Mechanical			
Tensile Modulus, (1 mm/min, Type 1A)	1400	MPa	ISO 527-1
Tensile Strain at Yield, (Type 1A, 50 mm/min)	10	%	ISO 527-2
Tensile Stress at Yield, (Type 1A, 50 mm/min)	28.0	MPa	ISO 527-2
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	2.3	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	19	kJ/m²	ISO 179
Notched Izod Impact Strength			
(23 °C, Type 1, Notch A)	4.0	kJ/m²	ISO 180
(-40 °C, Type 1, Notch A)	2.5	kJ/m²	ISO 180
Notched Izod Impact (Area), (23 °C)	4.00	kJ/m²	ASTM D256
Unnotched Izod Impact Strength			
(23 °C, Type 1)	No Break		ISO 180
(-40 °C, Type 1)	15	kJ/m²	ISO 180
Hardness			
Ball Indentation Hardness, (H 358/30)	65.0	MPa	ISO 2039-1
Ball Pressure Test, (130 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	94.0	°C	ISO 306
(A (10N), 120 °C/h)	149	°C	ISO 306

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

Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	120	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	85.0	°C	ISO 75-2/A
Electrical			
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			
Glow Wire Flammability Index, (2.0 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)	725	°C	IEC 60695-2-13
Oxygen Index	27	%	ISO 4589-2
Additional Information			
Water Absorption 23C/50RH	0.13	%	ISO 62
UL Information			
Flammability Classification			
(0.75 mm)	V-2		IEC 60695-11-10, -20
(1.5 mm)	V-2		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
Rear Temperature	180	°C
Middle Temperature	200	°C
Front Temperature	210	°C
Nozzle Temperature	220	°C
Processing (Melt) Temp	180 to 220	°C
Mold Temperature	40 to 80	°C
Screw Speed	<18	rpm
Back Pressure	5.00 to 10.0	MPa

Injection Rate	Slow-Moderate	
Cushion	<5.00	mm

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/.

© LyondellBasell Industries Holdings, B.V. 2026

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.

Trademarks

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