Technical Data Sheet

Polyflam RPP 4225 CS1 NAT

Polypropylene, Homopolymer

Product Description

25% glass fibre reinforced flame-retardant PP-Homopolymer; halogen free

Regulatory Status

For regulatory compliance information, see *Polyflam* RPP 4225 CS1 NAT Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

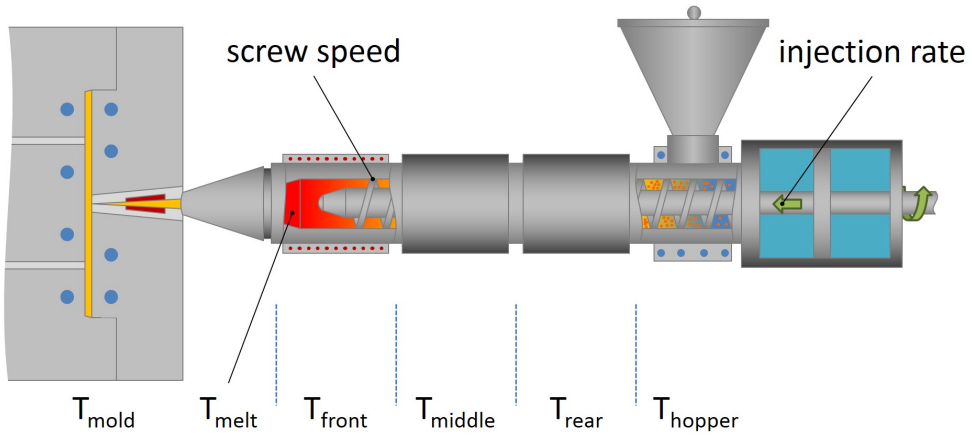
Status	Commercial: Active
Availability	Europe
Processing Method	Injection Molding
Attribute	Copper Contact Stabilized; Halogen Free; High Strength; Homopolymer; UL Listed under File Numbers E86615 / E132739 / E31765; UL RTI listed
Additive	Flame Retardant
Filler/Reinforcement	Glass Fiber, 25%
Resin ID	PP FR(40)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate			
(230 °C/2.16 kg)	4.0	cm³/10 min	ISO 1133
(230 °C/5.0 kg)	12	cm³/10 min	ISO 1133
Density, (Method A)	1.26	g/cm³	ISO 1183
Mechanical			
Tensile Modulus, (1 mm/min, Type 1A)	7300	MPa	ISO 527-1
Tensile Strain at Break, (Type 1A, 5 mm/min)	3.0	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 5 mm/min)	80.0	MPa	ISO 527-2
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	9.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	8.5	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	38	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	33	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (155 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(A (10N), 50 °C/h)	164	°C	ISO 306
(B (50N), 50 °C/h)	137	°C	ISO 306

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Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	157	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	144	°C	ISO 75-2/A
RTI Elec			
(1.6 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Imp			
(1.6 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Str			
(1.6 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
Electrical			
Surface Resistivity	>1.0E+15	ohm	IEC 60093
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Dielectric Strength, (in Oil, 1.00 mm, 23 °C, 2000 V/sec)	38	kV/mm	IEC 60243-1
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			
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	850	°C	IEC 60695-2-13
(3.0 mm)	850	°C	IEC 60695-2-13
Oxygen Index	44	%	ISO 4589-2
UL Information			
Flame Rating			
(1.6 mm)	V-0		UL 94
(3.0 mm)	V-0		UL 94
(3.0 mm)	5VA		UL 94
(0.8 mm)	V-2		UL 94
Flammability Classification			
(0.8 mm)	V-2		IEC 60695-11-10, -20
(1.6 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		

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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	200 to 230	°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	
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/.

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