Technical Data Sheet

Polyflam RIPP 4000 E CS1

Polypropylene Copolymer
LyondellBasell Industries
Engineering Plastics

Product Description
Unfilled flame-retardant PP-Copolymer, Extrusion grade, halogenfree

General		
Features	• Copolymer • Flame Retardant	• Good Processability • Halogen Free
UL File Number	• E86615	
Processing Method	• Extrusion	• Injection Molding
Resin ID (ISO 1043)	• PP FR(51)	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.06 g/cm³	1.06 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°c/2.16 Kg)	2.0 cm³/10min	2.0 cm³/10min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	232000 psi	1600 MPa	ISO 527-1/1A/1
Tensile Stress			ISO 527-2/1A/50
Yield	2180 psi	15.0 MPa	
Break	1740 psi	12.0 MPa	
Tensile Strain (Yield)	3.7 %	3.7 %	ISO 527-2/1A/50
Nominal Tensile Strain at Break	100 %	100 %	ISO 527-2/1A/50
Flexural Modulus [1]	232000 psi	1600 MPa	ISO 178
Flexural Stress [1]			ISO 178
4.4% Strain	3550 psi	24.5 MPa	
3.5% Strain	3510 psi	24.2 MPa	
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°f (-30°c)	1.4 ft·lb/in²	3.0 kJ/m²	
73°f (23°c)	3.3 ft·lb/in²	7.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°f (-30°c)	17 ft·lb/in²	35 kJ/m²	
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	201 °F	94.0 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed	131 °F	55.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	135 °F	57.0 °C	ISO 306/B50
--	280 °F	138 °C	ISO 306/A50
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
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
0.03 In (0.8 Mm)	V-0	V-0	
0.06 In (1.6 Mm)	V-0	V-0	
0.13 In (3.2 Mm)	V-0	V-0	
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)	1290 °F	700 °C	
0.12 In (3.0 Mm)	1290 °F	700 °C	

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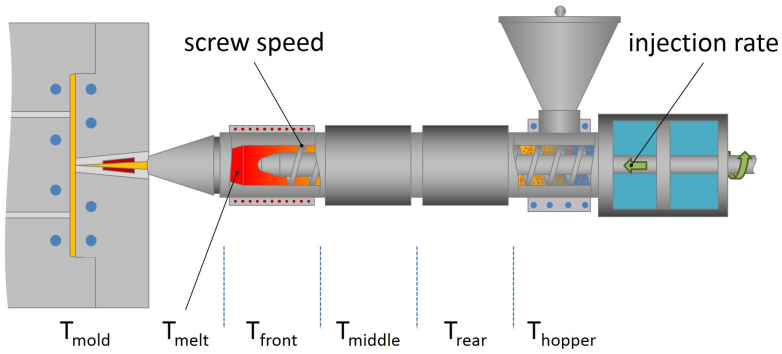

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 °F	70 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Processing (Melt) Temp	356 to 410 °F	180 to 210 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Pressure	11600 to 17400 psi	80.0 to 120 MPa
Injection Rate	Slow-Moderate	Slow-Moderate
Holding Pressure	5800 to 13100 psi	40.0 to 90.0 MPa
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Screw Speed	< 709 in/min	< 18 m/min

Injection Notes

Predrying

Predrying at 70°C for 2-4 hours is recommended as a precaution.

Reprocessing

Addition of regrind is normally possible, but it must be tested in each case regarding the percentage and requirements of the article. Thermal damage during first processing depends on processing parameters and the geometry of flow path and article.

Shut down

Avoid long melt residence time. Purge with base polymer or with polyolefines.

Finishing

Machining is usually possible.

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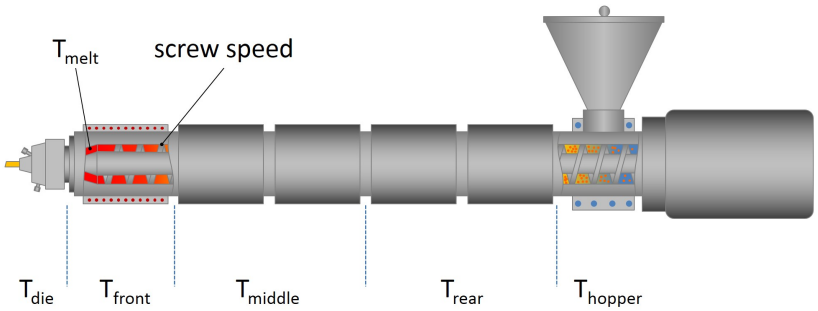

Extrusion	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 to 176 °F	70 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	< 0.10 %	< 0.10 %
Melt Temperature	338 to 410 °F	170 to 210 °C