Technical Data Sheet

POLYFLAM® RIPP 5000

Polypropylene Copolymer
Engineering Plastics

Product Description		
Unfilled flame-retardant PP-Copolymer		
General		
Features	• Copolymer	• Flame Retardant
Processing Method	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm³	0.910 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	13 cm³/10min	13 cm³/10min	ISO 1133
Molding Shrinkage	0.90 to 1.4 %	0.90 to 1.4 %	ISO 294-4
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	174000 psi	1200 MPa	ISO 527-2/1A/1
Tensile Stress			ISO 527-2/1A/50
Yield	3630 psi	25.0 MPa	
Break	2180 psi	15.0 MPa	
Tensile Strain (Yield)	8.4 %	8.4 %	ISO 527-2/1A/50
Nominal Tensile Strain at Break	400 %	400 %	ISO 527-2/1A/50
Flexural Modulus [1]	189000 psi	1300 MPa	ISO 178
Flexural Stress [1]			ISO 178
6.6% Strain	4640 psi	32.0 MPa	
3.5% Strain	4060 psi	28.0 MPa	
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	0.48 ft·lb/in²	1.0 kJ/m²	
73°F (23°C)	2.4 ft·lb/in²	5.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	9.5 ft·lb/in²	20 kJ/m²	
73°F (23°C)	40 ft·lb/in²	85 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	176 °F	80.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	122 °F	50.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	293 °F	145 °C	ISO 306/A50
--	158 °F	70.0 °C	ISO 306/B50
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

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
Self-Extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	ISO 3795
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	
0.08 in (2.0 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	

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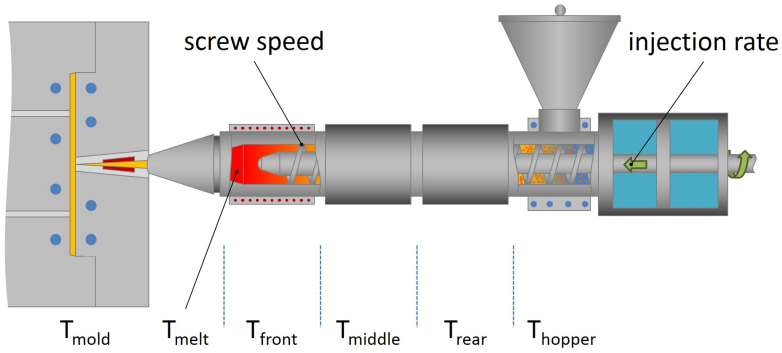

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 to 176 °F	70 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Processing (Melt) Temp	356 to 410 °F	180 to 210 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Pressure	11600 to 17400 psi	80.0 to 120 MPa
Injection Rate	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.