Technical Data Sheet

Polyflam RPP 4000 E NAT

Polypropylene, Homopolymer

Product Description

Unfilled flame-retardant PP-Homopolymer, Extrusion grade, halogenfree

Processing Method	Extrusion; Injection Molding
Attribute	Good Processability; Halogen Free; Homopolymer
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)	2.0	cm³/10 min	ISO 1133
Density, (Method A)	1.06	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	26.8	MPa	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min, Type 1A)	26	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	2300	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	4.1	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 50 mm/min)	16.6	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2600	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	37.1	MPa	ISO 178
(2.0 mm/min, 5.1%)	39.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	2.5	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	1.5	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	40	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	15	kJ/m²	ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	97.0	°C	ISO 306
(A (10N), 50 °C/h)	154	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa)	108	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	58.0	°C	ISO 75-2/A

Electrical			
Comparative Tracking Index (CTI)	600	V	IEC 60112
Flammable			
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)	775	°C	IEC 60695-2-13
(1.5 mm)	775	°C	IEC 60695-2-13
(3.0 mm)	775	°C	IEC 60695-2-13
UL Information			
Flammability Classification			
(0.8 mm)	V-0		IEC 60695-11-10, -20
(1.6 mm)	V-0		IEC 60695-11-10, -20
(3.0 mm)	5VA		IEC 60695-11-10, -20
(3.0 mm)	5V		IEC 60695-11-10, -20
(3.2 mm)	V-0		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	70	°C
Screw Speed	<300	mm/sec
Processing (Melt) Temp	180 to 210	°C
Holding Pressure	40.0 to 90.0	MPa
Injection Rate	Slow-Moderate	
Back Pressure	5.00 to 10.0	MPa
Mold Temperature	40 to 80	°C
Injection Pressure	80.0 to 120	MPa