Technical Data Sheet

Polyflam RPP 2000 S NAT

Polypropylene, Homopolymer

Product Description

Flame retardant polypropylene homopolymer compound, UV stabilized for outdoor applications (i.e. stadium seats), free of halogens

Processing Method	Injection Molding
Attribute	Halogen Free; Homopolymer
Additive	Flame Retardant; UV Stabilizer
Application	Outdoor Applications; Seats
Resin ID	PP FR(53)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (230 °C/2.16 kg)	7.0	cm³/10 min	ISO 1133
Density, (Method A)	0.910	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	32.0	MPa	ISO 527-2
Tensile Strain at Yield, (Type 1A, 50 mm/min)	11	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	1100	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched, (23 °C, Type 1, Edgewise)	No Break		ISO 179
Hardness			
Ball Pressure Test, (140 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	90.0	°C	ISO 306
(A (10N), 120 °C/h)	151	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	94.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	49.0	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B

RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	600	V	IEC 60112
High Amp Arc Ignition			UL 746A
Surface Resistivity	>1.0E+15	ohm	IEC 60093
Flammable			
Hot-wire Ignition (HWI)			UL 746A
Burning Rate			
(2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(2.00 mm, Self-Extinguishing)	0.0	mm/min	FMVSS 302
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)	875	°C	IEC 60695-2-13
(1.5 mm)	850	°C	IEC 60695-2-13
(3.0 mm)	800	°C	IEC 60695-2-13
Oxygen Index	26	%	ISO 4589-2
Additional Information			
Water Absorption 23C/50RH	0.16	%	ISO 62
UL Information			
Flammability Classification			
(0.8 mm)	V-2		IEC 60695-11-10, -20
(1.6 mm)	V-2		IEC 60695-11-10, -20
(3.2 mm)	V-2		IEC 60695-11-10, -20
UL File Number	E86615		

Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	70 to 80	°C
Processing (Melt) Temp	180 to 210	°C
Mold Temperature	40 to 80	°C