Technical Data Sheet

Polyflam RIPP 2000 S WHI87235

Polypropylene Copolymer

Product Description

Unfilled flame retardant polypropylene copolymer compound, UV stabilized for outdoor applications (i.e. stadium seats), free of halogens according to DIN VDE 0472 part 815

Processing Method	Injection Molding
Attribute	Copolymer; Halogen Free
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)	13	cm³/10 min	ISO 1133
Density, (Method A)	0.910	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	24.0	MPa	ISO 527-2
Tensile Strain at Yield, (Type 1A, 50 mm/min)	10	%	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)	13	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	2.5	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	46	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (120 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	64.0	°C	ISO 306
(A (10N), 120 °C/h)	141	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	78.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	53.0	°C	ISO 75-2/A

RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 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	FMVSS 302
(2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
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)	700	°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
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
Nozzle Temperature	210	°C
Processing (Melt) Temp	180 to 210	°C
Front Temperature	200	°C
Holding Pressure	30.0 to 70.0	MPa
Middle Temperature	190	°C
Rear Temperature	180	°C
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