Technical Data Sheet

Polyflam RPP 500 D NAT

Polypropylene, Homopolymer

Product Description

Flame retardant PP-homopolymer - standard grade without PBDE

Processing Method	Injection Molding
Attribute	Homopolymer
Additive	Flame Retardant

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (230 °C/2.16 kg)	10	cm³/10 min	ISO 1133
Density, (Method A)	0.940	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	28.0	MPa	ISO 527-2
Tensile Strain at Yield, (Type 1A, 50 mm/min)	10	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	1400	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	2.3	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	19	kJ/m²	ISO 179
Notched Izod Impact Strength			
(23 °C, Type 1, Notch A)	4.0	kJ/m²	ISO 180
(-40 °C, Type 1, Notch A)	2.5	kJ/m²	ISO 180
Notched Izod Impact (Area), (23 °C)	4.00	kJ/m²	ASTM D256
Unnotched Izod Impact Strength			
(23 °C, Type 1)	No Break		ISO 180
(-40 °C, Type 1)	15	kJ/m²	ISO 180
Hardness			
Ball Indentation Hardness, (H 358/30)	65.0	MPa	ISO 2039-1
Ball Pressure Test, (130 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	94.0	°C	ISO 306
(A (10N), 120 °C/h)	149	°C	ISO 306

Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	120	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	85.0	°C	ISO 75-2/A
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	600	V	IEC 60112
Surface Resistivity	>1.0E+15	ohm	IEC 60093
Flammable			
Glow Wire Flammability Index, (2.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	750	°C	IEC 60695-2-13
(1.5 mm)	725	°C	IEC 60695-2-13
(3.0 mm)	725	°C	IEC 60695-2-13
Oxygen Index	27	%	ISO 4589-2
Additional Information			
Water Absorption 23C/50RH	0.13	%	ISO 62
UL Information			
Flammability Classification			
(0.75 mm)	V-2		IEC 60695-11-10, -20
(1.5 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	220	°C
Screw Speed	<18	rpm
Processing (Melt) Temp	180 to 220	°C
Front Temperature	210	°C
Middle Temperature	200	°C
Rear Temperature	180	°C
Injection Rate	Slow-Moderate	
Back Pressure	5.00 to 10.0	MPa
Mold Temperature	40 to 80	°C
Cushion	<5.00	mm