Technical Data Sheet

Polyflam RABS 3000 NAT

Acrylonitrile Butadiene Styrene

Product Description

Flame retardant ABS standard grade without PBDE and higher stability

Processing Method	Injection Molding
Additive	Flame Retardant
Resin ID	ABS FR(17)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (220 °C/10.0 kg)	30	cm³/10 min	ISO 1133
Density, (Method A)	1.17	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	46.0	MPa	ISO 527-2
Flexural Modulus, (2.0 mm/min)	2500	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	2.7	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2500	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	70.0	MPa	ISO 178
(2.0 mm/min, 4.5%)	72.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	10	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	90	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	45	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (90 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	94.0	°C	ISO 306
(A (10N), 50 °C/h)	106	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	89.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	83.0	°C	ISO 75-2/A

RTI Elec			
(1.5 mm)	60.0	°C	UL 746B
(3.0 mm)	60.0	°C	UL 746B
RTI Imp			
(1.5 mm)	60.0	°C	UL 746B
(3.0 mm)	60.0	°C	UL 746B
RTI Str			
(1.5 mm)	60.0	°C	UL 746B
(3.0 mm)	60.0	°C	UL 746B
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
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			
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	700	°C	IEC 60695-2-13
(3.0 mm)	700	°C	IEC 60695-2-13
UL Information			
Flame Rating			
(1.5 mm)	V-0		UL 94
(3.0 mm)	V-0		UL 94
Flammability Classification			
(1.6 mm)	V-0		IEC 60695-11-10, -20
(3.2 mm)	V-0		IEC 60695-11-10, -20
UL File Number	E86615		

Injection Parameters	Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	70 to 80	°C
Screw Speed	<300	mm/sec
Processing (Melt) Temp	220 to 240	°C
Injection Rate	Slow-Moderate	
Back Pressure	5.00 to 10.0	MPa
Mold Temperature	40 to 60	°C