Technical Data Sheet

Schuladur A MV14 SHI FR1 BLK968106

Polybutylene Terephthalate

Product Description

High impact flame retardant halogenated PBT compound; without PBDE; UL (f1) black + white

Processing Method	Injection Molding
Attribute	Impact Modified
Additive	Flame Retardant
Resin ID	PBT-I FR(17)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (250 °C/2.16 kg)	5.0	cm³/10 min	ISO 1133
Density, (Method A)	1.37	g/cm³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	44.0	MPa	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min, Type 1A)	15	%	ISO 527-2
Tensile Strain at Yield, (Type 1A, 50 mm/min)	4.0	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2200	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	20	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	9.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	No Break		ISO 179
Hardness			
Ball Pressure Test, (125 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	134	°C	ISO 306
(A (10N), 50 °C/h)	213	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	123	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	61.0	°C	ISO 75-2/A

RTI Elec			
(1.5 mm)	140	°C	UL 746B
(3.0 mm)	140	°C	UL 746B
(0.75 mm)	140	°C	UL 746B
RTI Imp			
(1.5 mm)	110	°C	UL 746B
(3.0 mm)	110	°C	UL 746B
(0.75 mm)	110	°C	UL 746B
RTI Str			
(1.5 mm)	130	°C	UL 746B
(3.0 mm)	130	°C	UL 746B
(0.75 mm)	130	°C	UL 746B
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
Dielectric Strength, (in Oil, 1.00 mm, 23 °C, 2000 V/sec)	31	kV/mm	IEC 60243-1
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)	650	°C	IEC 60695-2-13
(1.5 mm)	650	°C	IEC 60695-2-13
(3.0 mm)	650	°C	IEC 60695-2-13
Oxygen Index	26	%	ISO 4589-2
UL Information			
Flame Rating			
(1.5 mm)	5VB		UL 94
(1.5 mm)	V-0		UL 94
(3.0 mm)	V-0		UL 94
(3.0 mm)	5VA		UL 94
(0.75 mm)	V-0		UL 94
(2.0 mm)	5VB		UL 94
Flammability Classification			
(0.75 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	5VB		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(2.0 mm)	5VB		IEC 60695-11-10, -20
(3.0 mm)	5VA		IEC 60695-11-10, -20
(3.0 mm)	V-0		IEC 60695-11-10, -20
UL File Number	E86615		

Injection Parameters	Nominal Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	120	°C
Suggested Max Moisture	0.02	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	250 to 260	°C
Injection Rate	Slow-Moderate	
Back Pressure	2.00 to 8.00	MPa
Mold Temperature	70 to 90	°C