Technical Data Sheet

Schuladur A MV 14 SHI FR 1

Polybutylene Terephthalate
LyondellBasell Industries
Engineering Plastics

Product Description		
High impact flame retardant halogenated PBT compound; without PBDE; UL (f1) black + white		
General		
Features	• Flame Retardant	• Impact Modified
UL File Number	• E86615	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PBT-I FR(17)	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.37 g/cm³	1.37 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (250°c/2.16 Kg)	5.0 cm³/10min	5.0 cm³/10min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	319000 psi	2200 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	6380 psi	44.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	4.0 %	4.0 %	ISO 527-2/1A/50
Nominal Tensile Strain at Break	15 %	15 %	ISO 527-2/1A/50
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°f (-30°c)	4.3 ft·lb/in²	9.0 kJ/m²	
73°f (23°c)	9.5 ft·lb/in²	20 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°f (-30°c)	No Break	No Break	
73°f (23°c)	No Break	No Break	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	253 °F	123 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	142 °F	61.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	273 °F	134 °C	ISO 306/B50
--	415 °F	213 °C	ISO 306/A50
Ball Pressure Test (257°f (125°c))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
0.030 In (0.75 Mm)	284 °F	140 °C	
0.06 In (1.5 Mm)	284 °F	140 °C	
0.12 In (3.0 Mm)	284 °F	140 °C	
RTI Imp			UL 746B
0.030 In (0.75 Mm)	230 °F	110 °C	
0.06 In (1.5 Mm)	230 °F	110 °C	
0.12 In (3.0 Mm)	230 °F	110 °C	
RTI Str			UL 746B
0.030 In (0.75 Mm)	266 °F	130 °C	
0.06 In (1.5 Mm)	266 °F	130 °C	
0.12 In (3.0 Mm)	266 °F	130 °C	
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1

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Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Electric Strength [1]			IEC 60243-1
73°f (23°c), 0.0394 In (1.00 Mm), In Oil	790 V/mil	31 kV/mm	
Comparative Tracking Index	600 V	600 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746A
0.030 In (0.75 Mm)	PLC 0	PLC 0	
0.06 In (1.5 Mm)	PLC 0	PLC 0	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746A
0.030 In (0.75 Mm)	PLC 4	PLC 4	
0.06 In (1.5 Mm)	PLC 3	PLC 3	
0.12 In (3.0 Mm)	PLC 2	PLC 2	
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate			
0.0787 In (2.00 Mm), Self-extinguishing	0.0 in/min	0.0 mm/min	ISO 3795
0.0787 In (2.00 Mm), Self-extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
Flame Rating			UL 94 IEC 60695-11-10, -20
0.030 In (0.75 Mm)	V-0	V-0	
0.06 In (1.5 Mm)	• V-0 • 5VB	• V-0 • 5VB	
0.12 In (3.0 Mm)	• V-0 • 5VA	• V-0 • 5VA	
0.08 In (2.0 Mm)	5VB	5VB	
Glow Wire Flammability Index			IEC 60695-2-12
0.030 In (0.75 Mm)	1760 °F	960 °C	
0.06 In (1.5 Mm)	1760 °F	960 °C	
0.12 In (3.0 Mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.030 In (0.75 Mm)	1200 °F	650 °C	
0.06 In (1.5 Mm)	1200 °F	650 °C	
0.12 In (3.0 Mm)	1200 °F	650 °C	
Oxygen Index	26 %	26 %	ISO 4589-2

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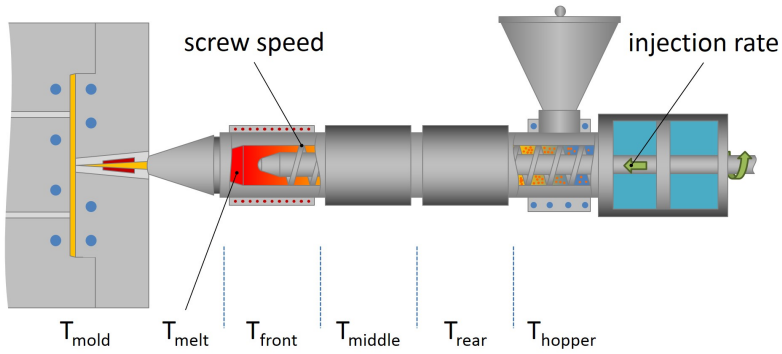

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	0.02 %	0.02 %
Processing (Melt) Temp	482 to 500 °F	250 to 260 °C
Mold Temperature	158 to 194 °F	70 to 90 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	290 to 1160 psi	2.00 to 8.00 MPa
Screw Speed	< 591 in/min	< 15 m/min
Injection Notes		
Mould surface contacting melt should be of non-corrosive steel (content of chrome > 12%)		

Notes

[1] 2000 V/sec

Notes

These are typical property values not to be construed as specification limits.