

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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
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/cm ³	1.37 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	5.0 cm ³ /10min	5.0 cm ³ /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/in ²	9.0 kJ/m ²	
73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	
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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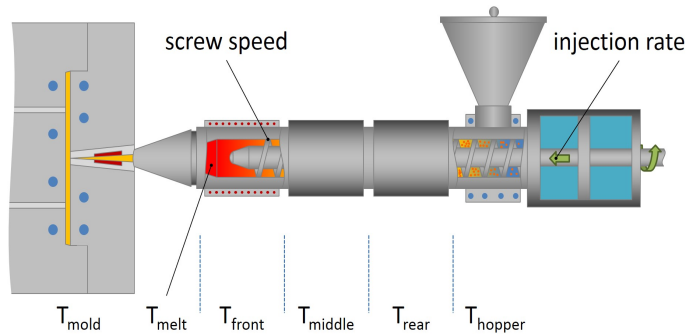
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Electric Strength ¹ 73°F (23°C), 0.0394 in (1.00 mm), in Oil	790 V/mil	31 kV/mm	IEC 60243-1
Comparative Tracking Index	600 V	600 V	IEC 60112
High Amp Arc Ignition (HAI) 0.030 in (0.75 mm) 0.06 in (1.5 mm) 0.12 in (3.0 mm)	PLC 0 PLC 0 PLC 0	PLC 0 PLC 0 PLC 0	UL 746A
Hot-wire Ignition (HWI) 0.030 in (0.75 mm) 0.06 in (1.5 mm) 0.12 in (3.0 mm)	PLC 4 PLC 3 PLC 2	PLC 4 PLC 3 PLC 2	UL 746A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate 0.0787 in (2.00 mm), Self-Extinguishing 0.0787 in (2.00 mm), Self-Extinguishing	0.0 in/min 0.0 in/min	0.0 mm/min 0.0 mm/min	ISO 3795 FMVSS 302
Flame Rating 0.030 in (0.75 mm) 0.06 in (1.5 mm) 0.12 in (3.0 mm) 0.08 in (2.0 mm)	V-0 V-0 5VB 5VA 5VB	V-0 V-0 5VB 5VA 5VB	UL 94 IEC 60695-11-10, -20
Glow Wire Flammability Index 0.030 in (0.75 mm) 0.06 in (1.5 mm) 0.12 in (3.0 mm)	1760 °F 1760 °F 1760 °F	960 °C 960 °C 960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature 0.030 in (0.75 mm) 0.06 in (1.5 mm) 0.12 in (3.0 mm)	1200 °F 1200 °F 1200 °F	650 °C 650 °C 650 °C	IEC 60695-2-13
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%)

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Notes

¹ 2000 V/sec

Notes

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

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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