

Technical Data Sheet

SCHULADUR[®] A GF 30 HF2 HI FR1 GREY

Polybutylene Terephthalate
Engineering Plastics

Product Description

Flame retardant PBT with 30% glass fiber; high flow, high impact, halogenated

General

Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Filled • Flame Retardant	• Halogenated • High Flow	• Impact Modified
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PBT-I GF30 FR(17)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.60 g/cm ³	1.60 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	20 cm ³ /10min	20 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.2 %	1.2 %	
Flow	0.30 %	0.30 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.45E+6 psi	10000 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	16000 psi	110 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0 %	2.0 %	ISO 527-2/1A/5
Flexural Modulus	1.35E+6 psi	9300 MPa	ISO 178
Flexural Stress (2.4% Strain)	25400 psi	175 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.9 ft·lb/in ²	6.0 kJ/m ²	
73°F (23°C)	3.8 ft·lb/in ²	8.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	24 ft·lb/in ²	50 kJ/m ²	
73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	437 °F	225 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	390 °F	199 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	424 °F	218 °C	ISO 306/A50
--	374 °F	190 °C	ISO 306/B50
Ball Pressure Test (392°F (200°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746
0.06 in (1.5 mm)	167 °F	75.0 °C	
0.08 in (2.0 mm)	167 °F	75.0 °C	
0.12 in (3.0 mm)	167 °F	75.0 °C	
RTI Imp			UL 746
0.06 in (1.5 mm)	167 °F	75.0 °C	
0.08 in (2.0 mm)	167 °F	75.0 °C	
0.12 in (3.0 mm)	167 °F	75.0 °C	

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
RTI Str			UL 746
0.06 in (1.5 mm)	167 °F	75.0 °C	
0.08 in (2.0 mm)	167 °F	75.0 °C	
0.12 in (3.0 mm)	167 °F	75.0 °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
Comparative Tracking Index	225 V	225 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.06 in (1.5 mm)	PLC 1	PLC 1	
0.12 in (3.0 mm)	PLC 0	PLC 0	
Hot-wire Ignition (HWI)			UL 746
0.06 in (1.5 mm)	PLC 2	PLC 2	
0.12 in (3.0 mm)	PLC 1	PLC 1	
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
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.5 mm)	V-0	V-0	
0.08 in (2.0 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
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)	1290 °F	700 °C	
0.06 in (1.5 mm)	1290 °F	700 °C	
0.12 in (3.0 mm)	1290 °F	700 °C	
Oxygen Index	31 %	31 %	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 %
Suggested Max Regrind	25 %	25 %
Processing (Melt) Temp	464 to 500 °F	240 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 surfaces in contact with melt should be of non-corrosive steel, chrome content >12%

Notes

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