Technical Data Sheet

SCHULADUR® A GF 30 FR 2 natural

Polybutylene Terephthalate
Engineering Plastics

Product Description
flame retardant PBT with 30% glass fiber, halogenfree

General			
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Filled	• Flame Retardant	• Halogen Free
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PBT GF30 FR(40)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.55 g/cm³	1.55 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	30 cm³/10min	30 cm³/10min	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	1.57E+6 psi	10800 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	16700 psi	115 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0 %	2.0 %	ISO 527-2/1A/5
Flexural Modulus [1]	1.58E+6 psi	10900 MPa	ISO 178
Flexural Stress [1] (2.3% Strain)	27600 psi	190 MPa	ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	4.8 ft·lb/in²	10 kJ/m²	
73°F (23°C)	3.8 ft·lb/in²	8.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	19 ft·lb/in²	40 kJ/m²	
73°F (23°C)	20 ft·lb/in²	42 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	424 °F	218 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	412 °F	211 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	415 °F	213 °C	ISO 306/A50
--	397 °F	203 °C	ISO 306/B50
Ball Pressure Test (392°F (200°C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746
0.016 in (0.40 mm)	167 °F	75.0 °C	
0.020 in (0.50 mm)	167 °F	75.0 °C	
0.030 in (0.75 mm)	167 °F	75.0 °C	
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	

Technical Data Sheet

SCHULADUR® A GF 30 FR 2 natural

Polybutylene Terephthalate
Engineering Plastics

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
RTI Imp			UL 746
0.016 in (0.40 mm)	167 °F	75.0 °C	
0.020 in (0.50 mm)	167 °F	75.0 °C	
0.030 in (0.75 mm)	167 °F	75.0 °C	
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 Str			UL 746
0.016 in (0.40 mm)	167 °F	75.0 °C	
0.020 in (0.50 mm)	167 °F	75.0 °C	
0.030 in (0.75 mm)	167 °F	75.0 °C	
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	475 V	475 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.016 in (0.40 mm)	PLC 0	PLC 0	
0.020 in (0.50 mm)	PLC 0	PLC 0	
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 746
0.016 in (0.40 mm)	PLC 1	PLC 1	
0.020 in (0.50 mm)	PLC 1	PLC 1	
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	
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
0.016 in (0.40 mm)	V-0	V-0	
0.020 in (0.50 mm)	V-0	V-0	
0.030 in (0.75 mm)	V-0	V-0	
0.06 in (1.5 mm)	• V-0 • 5V	• V-0 • 5V	
0.12 in (3.0 mm)	V-0	V-0	
0.08 in (2.0 mm)	5V	5V	
Glow Wire Flammability Index			IEC 60695-2-12
0.020 in (0.50 mm)	1760 °F	960 °C	
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	

Technical Data Sheet

SCHULADUR® A GF 30 FR 2 natural

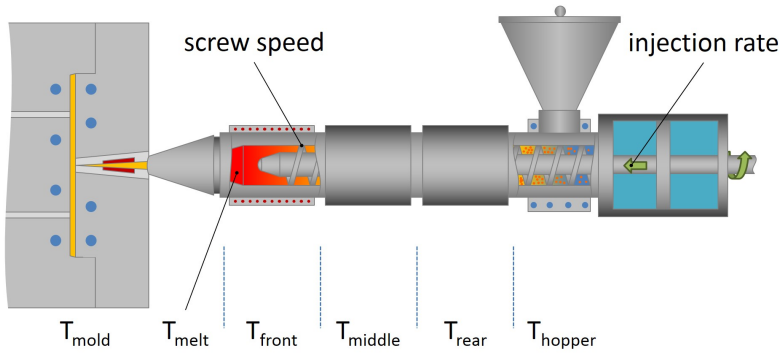
Polybutylene Terephthalate
Engineering Plastics

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Glow Wire Ignition Temperature			IEC 60695-2-13
0.020 in (0.50 mm)	1380 °F	750 °C	
0.030 in (0.75 mm)	1430 °F	775 °C	
0.06 in (1.5 mm)	1430 °F	775 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Oxygen Index	29 %	29 %	ASTM D2863

Technical Data Sheet

SCHULADUR® A GF 30 FR 2 natural

Polybutylene Terephthalate
Engineering Plastics



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 518 °F	240 to 270 °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 are recommended to be of non-corrosive steel, chrome content >12%		

Notes

[1] 0.079 in/min (2.0 mm/min)

Notes

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