

Technical Data Sheet

Schulamid 6 GF 50 H NAT



Polyamide 6

Product Description

50% glass fiber reinforced PA 6, high strength and stiffness, heat stabilized

Processing Method	Injection Molding
Attribute	Heat Stabilized; High Stiffness; High Strength
Additive	Heat Stabilizer
Filler/Reinforcement	Glass Fiber, 50%

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.55	g/cm ³	ISO 1183
Viscosity Number	145	cm ³ /g	ISO 307
Mechanical			
Flexural Strain at Flexural Strength	3.1	%	ISO 178
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.2	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	4.5	%	ISO 527-2
Flexural Modulus	15000	MPa	ISO 178
Tensile Stress at Break			
(Type 1A, 5 mm/min)	210	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	130	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	16000	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	9500	MPa	ISO 527-1
Flexural Stress	310	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	15	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	10	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	24	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	95	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise)	90	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	No Break		ISO 179
(-30 °C, Type 1, Edgewise) - Conditioned	90	kJ/m ²	ISO 179
Hardness			

Ball Indentation Hardness, (H 358/30)	280	MPa	ISO 2039-1
Ball Pressure Test, (190 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	212	°C	ISO 306
(A (10N), 50 °C/h)	216	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	215	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	205	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	125	°C	UL 746B
(3.0 mm)	125	°C	UL 746B
(0.75 mm)	125	°C	UL 746B
RTI Imp			
(1.5 mm)	120	°C	UL 746B
(3.0 mm)	125	°C	UL 746B
(0.75 mm)	115	°C	UL 746B
RTI Str			
(1.5 mm)	130	°C	UL 746B
(3.0 mm)	140	°C	UL 746B
(0.75 mm)	130	°C	UL 746B
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
- Conditioned	>1.0E+10	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	450	V	IEC 60112
Surface Resistivity	>1.0E+15	ohm	IEC 60093
- Conditioned	>1.0E+12	ohm	IEC 60093
Flammable			
Burning Rate			
(2.00 mm)	30	mm/min	FMVSS 302
(2.00 mm)	30	mm/min	ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	650	°C	IEC 60695-2-12
(3.0 mm)	650	°C	IEC 60695-2-12
UL Information			
Flammability Classification			
(0.75 mm)	HB		IEC 60695-11-10, -20
(1.5 mm)	HB		IEC 60695-11-10, -20
(3.0 mm)	HB		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Processing (Melt) Temp	250 to 280	°C
Mold Temperature	60 to 100	°C