

Technical Data Sheet

**Schulamid 6 GF15 FR4 K1681 NAT**



Polyamide 6

**Product Description**

15% glass fibre reinforced flame-retardant Polyamide 6 grade without PBDE.

CAE data for rheological simulation available on request.

**Processing Method**            Injection Molding

**Filler/Reinforcement**        Glass Fiber, 15%

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.38	g/cm <sup>3</sup>	ISO 1183
Viscosity Number	136	cm <sup>3</sup> /g	ISO 307
<b>Mechanical</b>			
Tensile Strain at Break, (Type 1A, 23 °C, 5 mm/min)	2.7	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 23 °C, 5 mm/min)	113	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	6900	MPa	ISO 527-1
<b>Impact</b>			
Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A)	7.0	kJ/m <sup>2</sup>	ISO 179
Charpy Impact Strength - Unnotched, (23 °C, Type 1, Edgewise)	43	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	205	°C	ISO 306
(A (10N), 50 °C/h)	212	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	216	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	200	°C	ISO 75-2/A
<b>Electrical</b>			
Volume Resistivity	1000000000 0000	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	250	V	IEC 60112
Surface Resistivity	1E+15	ohm	IEC 60093
<b>Flammable</b>			

Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
(0.38 mm)	800	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	900	°C	IEC 60695-2-13
(1.5 mm)	900	°C	IEC 60695-2-13
(3.0 mm)	900	°C	IEC 60695-2-13
(0.38 mm)	825	°C	IEC 60695-2-13
Oxygen Index	26	%	ISO 4589-2

**UL Information**

Flame Rating			
(1.6 mm)	V-2		UL 94
(3.2 mm)	V-2		UL 94
(0.8 mm)	V-2		UL 94
(0.40 mm)	V-2		UL 94
Flammability Classification			
(0.40 mm)	V-2		IEC 60695-11-10, -20
(0.8 mm)	V-2		IEC 60695-11-10, -20
(1.6 mm)	V-2		IEC 60695-11-10, -20
(3.2 mm)	V-2		IEC 60695-11-10, -20
UL File Number	E86615		

Injection Parameters	Nominal Value	Units
Drying Time	4.0 to 6.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.1	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	240 to 260	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 90	°C