Technical Data Sheet

Schulamid 6 GF30 FR4 Black968001

Polyamide 6

Product Description

30% glass fibre reinforced flame-retardant halogenated Polyamide 6 grade; without PBDE

Processing Method	Injection Molding
Attribute	Good Strength
Additive	Flame Retardant
Filler/Reinforcement	Glass Fiber, 30%
Resin ID	PA6 GF30 FR(17)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.55	g/cm³	ISO 1183
Viscosity Number	145	cm³/g	ISO 307
Mechanical			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.5	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	5.2	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	155	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	107	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	9500	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	6800	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	10	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	6.0	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	13	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	65	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	58	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	74	kJ/m²	ISO 179
Hardness			
Ball Indentation Hardness, (H 358/30)	200	MPa	ISO 2039-1
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			

Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	216	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	202	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°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)	250	V	IEC 60112
High Amp Arc Ignition			UL 746A
Surface Resistivity	>1.0E+15	ohm	IEC 60093
- Conditioned	>1.0E+12	ohm	IEC 60093
Flammable			
Hot-wire Ignition (HWI)			UL 746A
Burning Rate			
(0.750 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(1.50 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(3.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
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
Glow Wire Ignition Temperature			
(0.75 mm)	825	°C	IEC 60695-2-13
(1.5 mm)	825	°C	IEC 60695-2-13
(3.0 mm)	825	°C	IEC 60695-2-13
Oxygen Index	30	%	ISO 4589-2
UL Information			
Flame Rating			
(1.5 mm)	V-0		UL 94
(3.0 mm)	V-0		UL 94
(0.75 mm)	V-0		UL 94
Flammability Classification			
(0.75 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(3.0 mm)	V-0		IEC 60695-11-10, -20
UL File Number	E86615		

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	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	240 to 270	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 100	°C