Technical Data Sheet

Schulamid 6 GBF3015 FR4 BLK968001

Polyamide 6

Product Description

30% glass fiber and glass beads reinforced flame-retardant Polyamide 6 grade with low warpage, high mechanical stability and high dimensional stability; without PBDE

Processing Method	Injection Molding
Attribute	Low Warpage
Additive	Flame Retardant
Filler/Reinforcement	Glass Bead\Glass Fiber, 30%
Resin ID	PA6

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.60	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	6.0	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	130	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	80.0	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	8800	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	5000	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	6.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	7.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	50	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	40	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	53	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			

Vicat Softening Temperature			
(B (50N), 50 °C/h)	205	°C	ISO 306
(A (10N), 50 °C/h)	210	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	210	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	190	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(1.0 mm)	65.0	°C	UL 746B
RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(1.0 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(1.0 mm)	65.0	°C	UL 746B
Electrical			
Comparative Tracking Index (CTI)	200	V	IEC 60112
Flammable			
Burning Rate			
(1.50 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(3.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(1.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
(1.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	800	°C	IEC 60695-2-13
(3.0 mm)	800	°C	IEC 60695-2-13
(1.0 mm)	800	°C	IEC 60695-2-13
Oxygen Index	35	%	ISO 4589-2
UL Information			
Flame Rating			
(1.5 mm)	5VA		UL 94
(1.5 mm)	V-0		UL 94
(3.0 mm)	5VA		UL 94
(3.0 mm)	V-0		UL 94
(1.0 mm)	V-0		UL 94
Flammability Classification			
(1.0 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	5VA		IEC 60695-11-10, -20
(3.0 mm)	5VA		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	4.0 to 6.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Screw Speed	<250	mm/sec
Processing (Melt) Temp	240 to 260	°C
Back Pressure	<250	mm/sec
Mold Temperature	60 to 90	°C