Technical Data Sheet

SCHULAMID® 6 GBF 3015 FR 4

Polyamide 6
Engineering Plastics

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

General		
Filler / Reinforcement	• Glass Bead\Glass Fiber, 30% Filler by Weight	
Features	• Flame Retardant	• Low Warpage
UL File Number	• E86615	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6 (GF+GB)30 FR(17)	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.60	--	g/cm³	ISO 1183/A
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.30	--	%	
Viscosity Number	145	--	cm³/g	ISO 307

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.28E+6 (8800)	725000 (5000)	psi (MPa)	ISO 527-2/1A/1
Tensile Stress (Break)	18900 (130)	11600 (80.0)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	2.5	6.0	%	ISO 527-2/1A/5

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	1.9 (4.0)	--	ft·lb/in² (kJ/m²)	
73°F (23°C)	2.9 (6.0)	3.3 (7.0)	ft·lb/in² (kJ/m²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	19 (40)	--	ft·lb/in² (kJ/m²)	
73°F (23°C)	24 (50)	25 (53)	ft·lb/in² (kJ/m²)	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
66 psi (0.45 MPa), Unannealed	410 (210)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	374 (190)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	410 (210)	--	°F (°C)	ISO 306/A50
--	401 (205)	--	°F (°C)	ISO 306/B50

Technical Data Sheet

SCHULAMID® 6 GBF 3015 FR 4

Polyamide 6
Engineering Plastics

Thermal	Dry	Conditioned	Unit	Test Method
Ball Pressure Test (392°F (200°C))	Pass	--		IEC 60695-10-2
RTI Elec				UL 746
0.04 in (1.0 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	
RTI Imp				UL 746
0.04 in (1.0 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	
RTI Str				UL 746
0.04 in (1.0 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Comparative Tracking Index	200	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate				ISO 3795
0.0394 in (1.00 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.0591 in (1.50 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.118 in (3.00 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
Flame Rating				UL 94 IEC 60695-11-10, -20
0.04 in (1.0 mm)	V-0	--		
0.06 in (1.5 mm)	• V-0 • 5VA	--		
0.12 in (3.0 mm)	• V-0 • 5VA	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.04 in (1.0 mm)	1760 (960)	--	°F (°C)	
0.06 in (1.5 mm)	1760 (960)	--	°F (°C)	
0.12 in (3.0 mm)	1760 (960)	--	°F (°C)	

Technical Data Sheet

SCHULAMID® 6 GBF 3015 FR 4

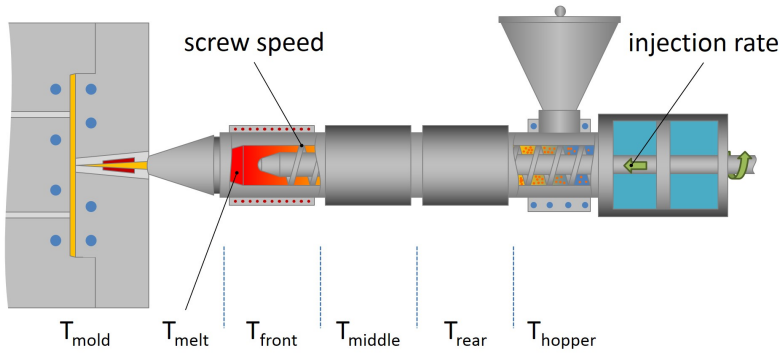
Polyamide 6
Engineering Plastics

Flammability	Dry	Conditioned	Unit	Test Method
Glow Wire Ignition Temperature				IEC 60695-2-13
0.04 in (1.0 mm)	1470 (800)	--	°F (°C)	
0.06 in (1.5 mm)	1470 (800)	--	°F (°C)	
0.12 in (3.0 mm)	1470 (800)	--	°F (°C)	
Oxygen Index	35	--	%	ISO 4589-2

Technical Data Sheet

SCHULAMID® 6 GBF 3015 FR 4

Polyamide 6
Engineering Plastics



Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Suggested Max Regrind	25 %	25 %
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Back Pressure	< 591 in/min	< 15 m/min
Screw Speed	< 591 in/min	< 15 m/min
Injection Notes		
Mould surface contacting melt should be of non-corrosive steel (content of chrome > 12%)		

Notes

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