Technical Data Sheet

Schulamid 6 GF 15 FR 4 K1681

Polyamide 6
LyondellBasell Industries
Engineering Plastics

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

General	
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Features	• Flame Retardant
UL File Number	• E86615
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6 GF15 FR(17+30)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.38	--	g/cm³	ISO 1183/A
Viscosity Number	145	--	cm³/g	ISO 307
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	1.03E+6 (7100)	580000 (4000)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Break)	17000 (117)	10300 (71.0)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	3.5	8.5	%	ISO 527-2/1A/5
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°f (-30°c)	2.9 (6.0)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	4.3 (9.0)	6.7 (14)	ft·lb/in² (kJ/m²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°f (-30°c)	26 (55)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	29 (60)	33 (70)	ft·lb/in² (kJ/m²)	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	433 (223)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	397 (203)	--	°F (°C)	ISO 75-2/Af
Ball Pressure Test (392°f (200°c))	Pass	--		IEC 60695-10-2
RTI Elec				UL 746B
0.015 In (0.38 Mm)	266 (130)	--	°F (°C)	
0.030 In (0.75 Mm)	266 (130)	--	°F (°C)	
0.06 In (1.5 Mm)	266 (130)	--	°F (°C)	
0.12 In (3.0 Mm)	266 (130)	--	°F (°C)	

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RTI Imp				UL 746B
0.015 In (0.38 Mm)	167 (75.0)	--	°F (°C)	
0.030 In (0.75 Mm)	194 (90.0)	--	°F (°C)	
0.06 In (1.5 Mm)	212 (100)	--	°F (°C)	
0.12 In (3.0 Mm)	212 (100)	--	°F (°C)	
RTI Str				UL 746B
0.015 In (0.38 Mm)	212 (100)	--	°F (°C)	
0.030 In (0.75 Mm)	230 (110)	--	°F (°C)	
0.06 In (1.5 Mm)	248 (120)	--	°F (°C)	
0.12 In (3.0 Mm)	248 (120)	--	°F (°C)	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	--	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	> 1.0E+10	ohms·m	IEC 62631-3-1
Comparative Tracking Index	275	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.015 In (0.38 Mm)	PLC 0	--		
0.030 In (0.75 Mm)	PLC 0	--		
0.06 In (1.5 Mm)	PLC 0	--		
0.12 In (3.0 Mm)	PLC 0	--		
Hot-wire Ignition (HWI)				UL 746A
0.015 In (0.38 Mm)	PLC 3	--		
0.030 In (0.75 Mm)	PLC 0	--		
0.06 In (1.5 Mm)	PLC 0	--		
0.12 In (3.0 Mm)	PLC 0	--		
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate				ISO 3795
0.0150 In (0.380 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	
0.0295 In (0.750 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)	

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Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94 IEC 60695-11-10, -20
0.015 In (0.38 Mm)	V-2	--		
0.030 In (0.75 Mm)	V-2	--		
0.06 In (1.5 Mm)	V-2	--		
0.12 In (3.0 Mm)	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.015 In (0.38 Mm)	1560 (850)	--	°F (°C)	
0.030 In (0.75 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)	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.015 In (0.38 Mm)	1520 (825)	--	°F (°C)	
0.030 In (0.75 Mm)	1650 (900)	--	°F (°C)	
0.06 In (1.5 Mm)	1650 (900)	--	°F (°C)	
0.12 In (3.0 Mm)	1650 (900)	--	°F (°C)	
Oxygen Index	26	--	%	ISO 4589-2

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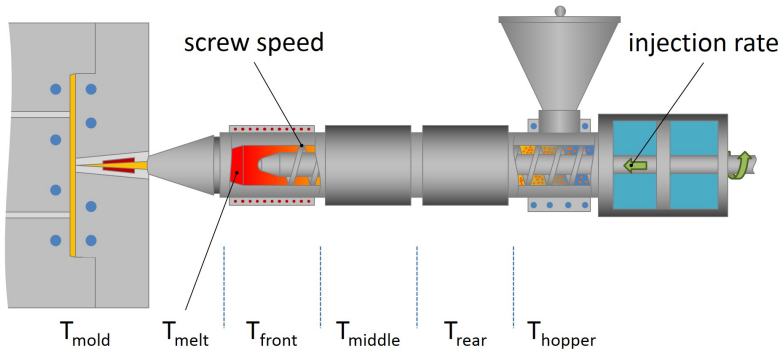

Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	290 to 1160 psi	2.00 to 8.00 MPa
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.