

Technical Data Sheet

Schulamid 6 GF 15 FR 4 K1681 BLACK 96.8076

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
UL File Number	• E86615
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.38 g/cm ³	1.38 g/cm ³	ISO 1183/A
Viscosity Number	136 cm ³ /g	136 cm ³ /g	ISO 307

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.00E+6 psi	6900 MPa	ISO 527-1/1A/1
Tensile Stress (Break, 73°F (23°C))	16400 psi	113 MPa	ISO 527-2/1A/5
Tensile Strain (Break, 73°F (23°C))	2.7 %	2.7 %	ISO 527-2/1A/5

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	3.3 ft·lb/in ²	7.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 73°F (23°C)	20 ft·lb/in ²	43 kJ/m ²	ISO 179/1eU

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 Psi (0.45 Mpa), Unannealed	421 °F	216 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	392 °F	200 °C	ISO 75-2/Af
Vicat Softening Temperature --	401 °F	205 °C	ISO 306/B50
--	414 °F	212 °C	ISO 306/A50

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	1.0E+15 ohms	1.0E+15 ohms	IEC 60093
Volume Resistivity	1.0E+13 ohms·m	1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index ¹	250 V	250 V	IEC 60112

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			
0.016 In (0.40 Mm)	V-2	V-2	UL 94 IEC 60695-11-10, -20
0.031 In (0.8 Mm)	V-2	V-2	UL 94
0.06 In (1.6 Mm)	V-2	V-2	UL 94 IEC 60695-11-10, -20
0.13 In (3.2 Mm)	V-2	V-2	UL 94 IEC 60695-11-10, -20
0.03 In (0.8 Mm)	V-2	V-2	IEC 60695-11-10, -20
Glow Wire Flammability Index			IEC 60695-2-12
0.015 In (0.38 Mm)	1470 °F	800 °C	
0.030 In (0.75 Mm)	1760 °F	960 °C	
0.06 In (1.5 Mm)	1760 °F	960 °C	
0.12 In (3.0 Mm)	1760 °F	960 °C	



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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Glow Wire Ignition Temperature			IEC 60695-2-13
0.015 In (0.38 Mm)	1520 °F	825 °C	
0.030 In (0.75 Mm)	1650 °F	900 °C	
0.06 In (1.5 Mm)	1650 °F	900 °C	
0.12 In (3.0 Mm)	1650 °F	900 °C	
Oxygen Index	26 %	26 %	ISO 4589-2

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Injection	Nominal Value (English)	Nominal Value (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%)