Technical Data Sheet

Schulamid 6 GF 15 FR 4 K1681 DEEP BLACK 96.8086

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
Resin ID (ISO 1043)	• PA6 GF15 FR(17+30)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.38 g/cm³	1.38 g/cm³	ISO 1183/A
Viscosity Number	136 cm³/g	136 cm³/g	ISO 307
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	1.04E+6 psi	7200 MPa	ISO 527-1/1A/1
Tensile Stress (Break, 73°f (23°c))	17800 psi	123 MPa	ISO 527-2/1A/5
Tensile Strain (Break, 73°f (23°c))	3.0 %	3.0 %	ISO 527-2/1A/5
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°f (-30°c)	3.0 ft·lb/in²	6.2 kJ/m²	
73°f (23°c)	3.1 ft·lb/in²	6.6 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°f (-30°c)	21 ft·lb/in²	44 kJ/m²	
73°f (23°c)	25 ft·lb/in²	52 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	415 °F	213 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	387 °F	197 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	401 °F	205 °C	ISO 306/B50
--	415 °F	213 °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]	225 V	225 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

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
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	
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	27 %	27 %	ISO 4589-2

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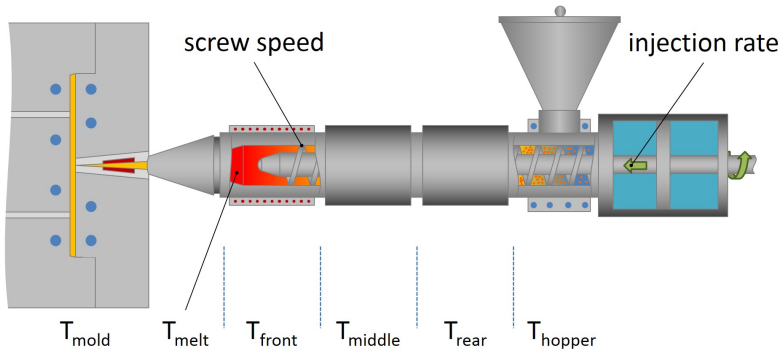

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back 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%)