

Technical Data Sheet

Schulamid 6 MV 14 FR 4 K1681 DEEP BLACK 96.8086

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description

Medium viscosity flame-retardant Polyamide 6 grade (V-2); without PBDE

General

UL File Number	• E86615
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6 FR(17+30)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
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Density	1.26 g/cm ³	1.26 g/cm ³	ISO 1183/A
Viscosity Number	133 cm ³ /g	133 cm ³ /g	ISO 307

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
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Tensile Modulus	471000 psi	3250 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	9080 psi	62.6 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	3.3 %	3.3 %	ISO 527-2/1A/50

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
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Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.3 ft·lb/in ²	4.8 kJ/m ²	
73°F (23°C)	2.5 ft·lb/in ²	5.3 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	24 ft·lb/in ²	50 kJ/m ²	
73°F (23°C)	26 ft·lb/in ²	54 kJ/m ²	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
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Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	356 °F	180 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	135 °F	57.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	383 °F	195 °C	ISO 306/B50
--	417 °F	214 °C	ISO 306/A50

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
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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	300 V	300 V	IEC 60112

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
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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)	1760 °F	960 °C	
0.030 In (0.75 Mm)	1710 °F	930 °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)	1710 °F	930 °C	
0.030 In (0.75 Mm)	1710 °F	930 °C	
0.06 In (1.5 Mm)	1520 °F	825 °C	
0.12 In (3.0 Mm)	1520 °F	825 °C	
Oxygen Index	21 %	21 %	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%)

Notes

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