

Technical Data Sheet

Schulamid 6 MV 14 FR 4 K1681

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description

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

General

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

Physical	Dry	Conditioned	Unit	Test Method
Density	1.26	--	g/cm ³	ISO 1183/A
Viscosity Number	130	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	551000 (3800)	181000 (1250)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Yield)	10200 (70.0)	5080 (35.0)	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	4.0	24	%	ISO 527-2/1A/50
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	1.4 (3.0)	--	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	1.9 (4.0)	8.6 (18)	ft·lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	23 (48)	--	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	26 ft·lb/in ² (55 kJ/m ²)	No Break	(kJ/m ²)	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 358/30)	23200 (160)	--	psi (MPa)	ISO 2039-1
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	367 (186)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	158 (70.0)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	396 (202)	--	°F (°C)	ISO 306/B50
--	423 (217)	--	°F (°C)	ISO 306/A50
Ball Pressure Test (392°F (200°C))	Pass	--		IEC 60695-10-2

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Thermal	Dry	Conditioned	Unit	Test Method
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)	
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	--	ohms·m	IEC 62631-3-1
Comparative Tracking Index	300	--	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 4	--		
0.030 In (0.75 Mm)	PLC 4	--		
0.06 In (1.5 Mm)	PLC 2	--		
0.12 In (3.0 Mm)	PLC 0	--		

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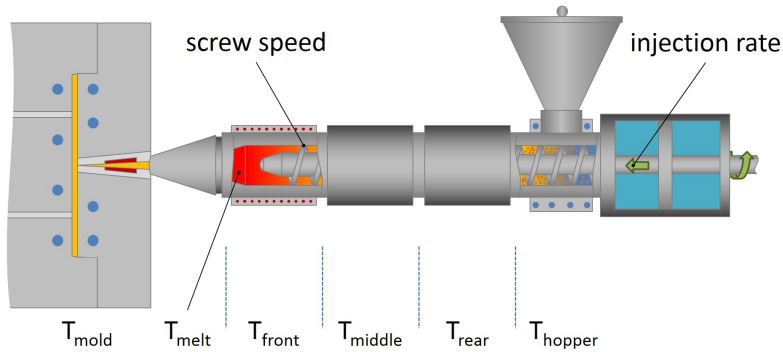
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Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				
				ISO 3795
0.0150 In (0.380 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	
0.0295 In (0.750 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	
0.0591 In (1.50 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	
0.118 In (3.00 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	
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)	1560 (850)	--	°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)	1520 (825)	--	°F (°C)	
0.06 In (1.5 Mm)	1520 (825)	--	°F (°C)	
0.12 In (3.0 Mm)	1520 (825)	--	°F (°C)	
Oxygen Index				
	23	--	%	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.