

Technical Data Sheet

Schulamid 6 NV 12 FR

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description
Low viscosity flame-retardant Polyamide 6 grade; halogen and phosphorus-free

General		
Features	<ul style="list-style-type: none"> Flame Retardant Halogen Free 	<ul style="list-style-type: none"> Low (to None) Phosphorus Content Low Viscosity
UL File Number	E86615	
Processing Method	Injection Molding	
Resin ID (ISO 1043)	PA6 FR(30)	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.15	--	g/cm ³	ISO 1183/A
Viscosity Number	130	--	cm ³ /g	ISO 307

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	493000 (3400)	203000 (1400)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Yield)	10200 (70.0)	5800 (40.0)	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	4.0	15	%	ISO 527-2/1A/50

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°f (-30°c)	1.7 (3.5)	2.4 (5.0)	ft·lb/in ² (kJ/m ²)	
73°f (23°c)	1.9 (4.0)	7.1 (15)	ft·lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°f (-30°c)	No Break	No Break		
73°f (23°c)	No Break	No Break		

Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	392 (200)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	194 (90.0)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	397 (203)	--	°F (°C)	ISO 306/B50
--	424 (218)	--	°F (°C)	ISO 306/A50
Ball Pressure Test (392°f (200°c))	Pass	--		IEC 60695-10-2

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RTI Elec				UL 746B
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
0.030 In (0.75 Mm)	167 (75.0)	--	°F (°C)	
0.06 In (1.5 Mm)	167 (75.0)	--	°F (°C)	
0.12 In (3.0 Mm)	176 (80.0)	--	°F (°C)	
RTI Str				UL 746B
0.030 In (0.75 Mm)	203 (95.0)	--	°F (°C)	
0.06 In (1.5 Mm)	203 (95.0)	--	°F (°C)	
0.12 In (3.0 Mm)	203 (95.0)	--	°F (°C)	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	> 1.0E+15	> 1.0E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	> 1.0E+10	ohms·m	IEC 62631-3-1
Comparative Tracking Index	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.030 In (0.75 Mm)	PLC 3	--		
0.06 In (1.5 Mm)	PLC 3	--		
0.12 In (3.0 Mm)	PLC 2	--		
Hot-wire Ignition (HWI)				UL 746A
0.75 In (19.1 Mm)	PLC 0	--		
1.50 In (38.1 Mm)	PLC 0	--		
3.00 In (76.2 Mm)	PLC 0	--		
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				ISO 3795
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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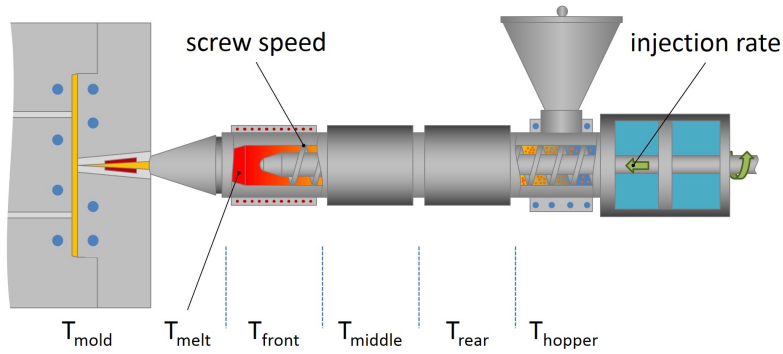
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Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94 IEC 60695-11-10, -20
0.015 In (0.38 Mm)	V-0	--		
0.030 In (0.75 Mm)	V-0	--		
0.06 In (1.5 Mm)	V-0	--		
0.12 In (3.0 Mm)	V-0	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.015 In (0.38 Mm)	1760 (960)	--	°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)	1380 (750)	--	°F (°C)	
0.06 In (1.5 Mm)	1380 (750)	--	°F (°C)	
0.12 In (3.0 Mm)	1380 (750)	--	°F (°C)	
Oxygen Index	36	--	%	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	0.04 to 0.10 %	0.04 to 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
Screw Speed	< 591 in/min	< 15 m/min

Notes

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