

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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant • Halogen Free	• 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)	10900 (75.0)	6530 (45.0)	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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Thermal	Dry	Conditioned	Unit	Test Method
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
Electric Strength				IEC 60243-1
73°F (23°C), 0.0394 in (1.00 mm), in Oil	760 (30)	--	V/mil (kV/mm)	
212°F (100°C), 0.0394 in (1.00 mm), in Oil	200 (7.7)	--	V/mil (kV/mm)	
302°F (150°C), 0.0394 in (1.00 mm), in Oil	61 (2.4)	--	V/mil (kV/mm)	
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	--		

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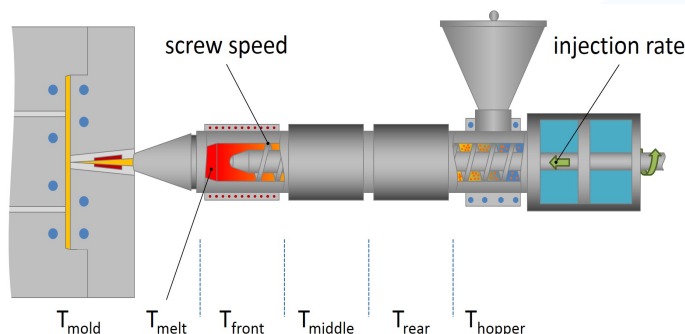
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				ISO 3795
0.0295 in (0.750 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.0591 in (1.50 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.118 in (3.00 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
Flame Rating				UL 94 IEC 60695-11-10, -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.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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