

Technical Data Sheet



Schulamid 6 GF 30 FR 2 BLACK HL3

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description

30% glass fibre reinforced flame-retardant Polyamide 6 grade; halogen free

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Flame Retardant	• Halogen Free	
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6 GF30 FR(40)		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.44	--	g/cm ³	ISO 1183/A
Viscosity Number	145	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.57E+6 (10800)	1.09E+6 (7500)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Break)	23200 (160)	15200 (105)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	5.0	%	ISO 527-2/1A/5
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	3.8 (8.0)	--	ft-lb/in ² (kJ/m ²)	
73°F (23°C)	4.8 (10)	7.1 (15)	ft-lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	27 (56)	--	ft-lb/in ² (kJ/m ²)	
73°F (23°C)	33 (70)	36 (75)	ft-lb/in ² (kJ/m ²)	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 psi (0.45 MPa), Unannealed	428 (220)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	408 (209)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	414 (212)	--	°F (°C)	ISO 306/B50
--	421 (216)	--	°F (°C)	ISO 306/A50
Ball Pressure Test (392°F (200°C))	Pass	--		IEC 60695-10-2

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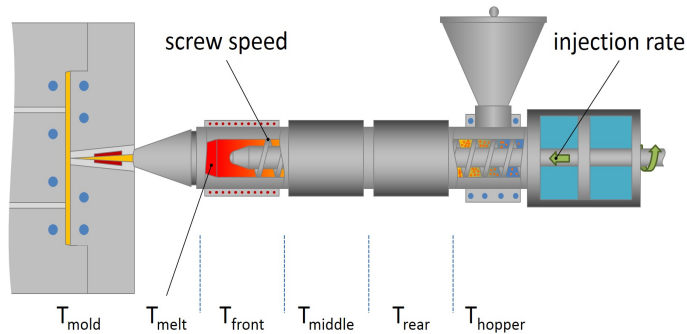
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	> 1.0E+15	> 1.0E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	> 1.0E+10	ohms·m	IEC 62631-3-1
Electric Strength ¹				IEC 60243-1
73°F (23°C), 0.0394 in (1.00 mm), in Oil	710 (28)	--	V/mil (kV/mm)	
Comparative Tracking Index	475	--	V	IEC 60112
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)	
Flammability Classification				IEC 60695-11-10, -20
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
0.030 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
0.030 in (0.75 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	35	--	%	ISO 4589-2
Smoke Density				ISO 5659-2
39.4 mil (1.00 mm)	280	--		
0.63 in (1.60 cm)	100	--		
Smoke Toxicity	0.54	--		NF X70-100

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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
Back Pressure	290 to 1160 psi	2.00 to 8.00 MPa
Screw Speed	< 591 in/min	< 15 m/min

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Notes

¹ 2000 V/sec

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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