

Technical Data Sheet

Schulamid 66 GF 25 FR 5 A

Polyamide 66
LyondellBasell Industries
Engineering Plastics

Product Description

25% glass fibre reinforced flame-retardant Polyamide 66 grade; without PBDE and antimony trioxide

General

Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight
Features	• Antimony Free • Flame Retardant • Good Electrical Properties • Good Strength
UL File Number	• E86615
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA 66 GF25 FR(16+72)

Physical

	Dry	Conditioned	Unit	Test Method
Density	1.59	--	g/cm ³	ISO 1183/A
Viscosity Number	170	--	cm ³ /g	ISO 307

Mechanical

	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.42E+6 (9800)	1.16E+6 (8000)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Break)	18100 (125)	16200 (112)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	2.2	3.0	%	ISO 527-2/1A/5
Flexural Modulus ¹	1.25E+6 (8600)	--	psi (MPa)	ISO 178
Flexural Stress ¹ (2.9% Strain)	28300 (195)	--	psi (MPa)	ISO 178

Impact

	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°f (-30°c)	4.8 (10)	--	ft·lb/in ² (kJ/m ²)	
73°f (23°c)	4.8 (10)	5.7 (12)	ft·lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°f (-30°c)	25 (52)	--	ft·lb/in ² (kJ/m ²)	
73°f (23°c)	25 (52)	26 (55)	ft·lb/in ² (kJ/m ²)	
Notched Izod Impact Strength (73°f (23°c))	4.0 (8.5)	--	ft·lb/in ² (kJ/m ²)	ISO 180/1A
Unnotched Izod Impact Strength (73°f (23°c))	22 (46)	--	ft·lb/in ² (kJ/m ²)	ISO 180/1U

Thermal

	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	> 482 (> 250)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	464 (240)	--	°F (°C)	ISO 75-2/Af

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Thermal	Dry	Conditioned	Unit	Test Method
Vicat Softening Temperature				
--	444 (229)	--	°F (°C)	ISO 306/B50
--	> 482 (> 250)	--	°F (°C)	ISO 306/A50
Ball Pressure Test (392°F (200°C))	Pass	--		IEC 60695-10-2
RTI Elec				UL 746B
0.020 In (0.50 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
0.020 In (0.50 Mm)	221 (105)	--	°F (°C)	
0.030 In (0.75 Mm)	221 (105)	--	°F (°C)	
0.06 In (1.5 Mm)	230 (110)	--	°F (°C)	
0.12 In (3.0 Mm)	230 (110)	--	°F (°C)	
RTI Str				UL 746B
0.020 In (0.50 Mm)	221 (105)	--	°F (°C)	
0.030 In (0.75 Mm)	221 (105)	--	°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	4.7E+14	1.4E+13	ohms	IEC 60093
Volume Resistivity	2.7E+14	1.8E+13	ohms·m	IEC 62631-3-1
Comparative Tracking Index	400	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.020 In (0.50 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	--		

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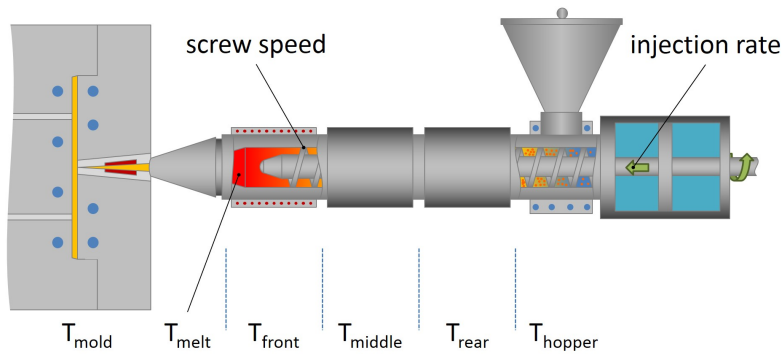
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Electrical	Dry	Conditioned	Unit	Test Method
Hot-wire Ignition (HWI)				
0.020 In (0.50 Mm)	PLC 0	--		UL 746A
0.030 In (0.75 Mm)	PLC 0	--		
0.06 In (1.5 Mm)	PLC 0	--		
0.12 In (3.0 Mm)	PLC 0	--		
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				
0.0197 In (0.500 Mm), Self-extinguishing	0.0	--	in/min (mm/min)	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				
0.020 In (0.50 Mm)	V-0	--		UL 94 IEC 60695-11-10, -20
0.030 In (0.75 Mm)	V-0	--		
0.06 In (1.5 Mm)	• V-0 • 5VA	--		
0.12 In (3.0 Mm)	• V-0 • 5VA	--		
Glow Wire Flammability Index				
0.020 In (0.50 Mm)	1760 (960)	--	°F (°C)	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				
0.020 In (0.50 Mm)	1650 (900)	--	°F (°C)	IEC 60695-2-13
0.030 In (0.75 Mm)	1650 (900)	--	°F (°C)	
0.06 In (1.5 Mm)	1650 (900)	--	°F (°C)	
0.12 In (3.0 Mm)	1710 (930)	--	°F (°C)	
Oxygen Index	34	--	%	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	518 to 572 °F	270 to 300 °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

¹ 0.079 in/min (2.0 mm/min)

Notes

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