

Technical Data Sheet



Schulamid 612 FS 4004

Polyamide 612
LyondellBasell Industries
Engineering Plastics

Product Description

High impact modified Polyamide 612 with highly effective long term heat stabilization system. Grade designed for extrusion applications. Matte surface quality. High chemical resistance.

Applications: Fluid systems. Specially used in automotive fluid systems.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Heat Aging Resistant	• Impact Modified • Low Gloss	• Salt Water/Spray Resistant
Automotive Specifications	• GM GMW15702-022341 PA612-I Color: 96.8001 Black		
Processing Method	• Extrusion		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.01	--	g/cm ³	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	160000 (1100)	85600 (590)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Yield)	5080 (35.0)	3920 (27.0)	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	29	36	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	> 250	> 250	%	ISO 527-2/1A/50
Flexural Modulus ¹	145000 (1000)	--	psi (MPa)	ISO 178
Flexural Stress ¹				ISO 178
7.0% Strain	6380 (44.0)	--	psi (MPa)	
3.5% Strain	5080 (35.0)	--	psi (MPa)	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F (-40°C)	45 (95)	--	ft-lb/in ² (kJ/m ²)	
-22°F (-30°C)	33 (70)	--	ft-lb/in ² (kJ/m ²)	
73°F (23°C)	52 (110)	57 (120)	ft-lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F (-40°C)	No Break	--		
-22°F (-30°C)	No Break	--		
73°F (23°C)	No Break	No Break		
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 358/30)	9280 (64.0)	--	psi (MPa)	ISO 2039-1

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 psi (0.45 MPa), Unannealed	212 (100)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	113 (45.0)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	230 (110)	--	°F (°C)	ISO 306/B50
--	392 (200)	--	°F (°C)	ISO 306/A50
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
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				
0.0787 in (2.00 mm)	1.2 (30)	--	in/min (mm/min)	ISO 3795
0.0787 in (2.00 mm)	1.2 (30)	--	in/min (mm/min)	FMVSS 302
Flammability Classification				IEC 60695-11-10, -20
0.06 in (1.5 mm)	HB	--		
0.12 in (3.0 mm)	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.06 in (1.5 mm)	1340 (725)	--	°F (°C)	
0.12 in (3.0 mm)	1340 (725)	--	°F (°C)	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.06 in (1.5 mm)	1290 (700)	--	°F (°C)	
0.12 in (3.0 mm)	1290 (700)	--	°F (°C)	

Additional Information

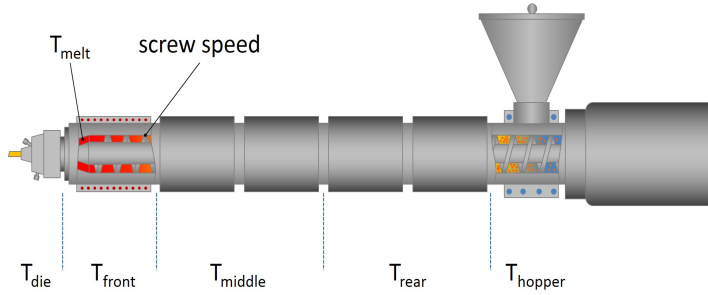
ISO 1874-PA 612-EAGHLW-18-010-N
DIN73378-PA 612-HIHL

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Extrusion	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Melt Temperature	446 to 518 °F	230 to 270 °C

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Notes

¹ 0.079 in/min (2.0 mm/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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