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

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/cm³	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/in² (kJ/m²)	
-22°f (-30°c)	33 (70)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	52 (110)	57 (120)	ft·lb/in² (kJ/m²)	
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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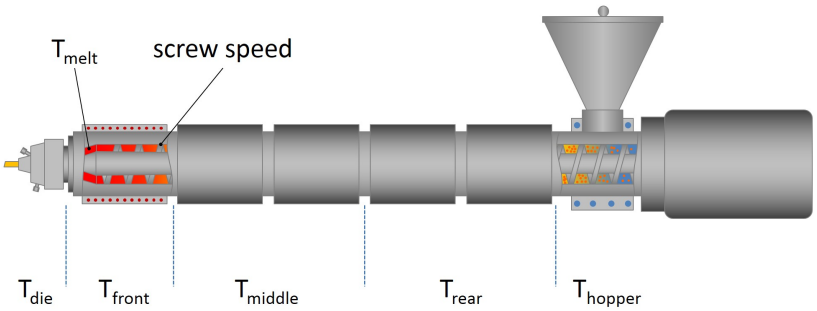

Extrusion	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Melt Temperature	446 to 518 °F	230 to 270 °C

Notes

[1] 0.079 in/min (2.0 mm/min)

Notes

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