Technical Data Sheet

Schulamid 612 FS 5003 MC

Polyamide 612
LyondellBasell Industries
Engineering Plastics

Product Description

Impact modified Polyamide 612 with heat stabilization. Specially designed for outside coating of metal tubes. Improved flow properties. High chemical resistance. High gloss surface.

General

Features	• Chemical Resistant • Heat Aging Resistant	• Impact Modified • Light Stabilized	• Salt Water/Spray Resistant
Automotive Specifications	• GM GMW15702-022191 PA612-I Color: 96.8001 Black		
Processing Method	• Extrusion	• Injection Molding	
Resin ID (ISO 1043)	• PA612		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.04	--	g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (245°c/5.0 Kg)	10	--	cm³/10min	ISO 1133
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	276000 (1900)	120000 (830)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Yield)	7250 (50.0)	5080 (35.0)	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	5.5	22	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	35	300	%	ISO 527-2/1A/50
Flexural Modulus [1]	203000 (1400)	--	psi (MPa)	ISO 178
Flexural Stress [1]				ISO 178
7.1% Strain	8850 (61.0)	--	psi (MPa)	
3.5% Strain	6960 (48.0)	--	psi (MPa)	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°f (-40°c)	5.7 (12)	--	ft·lb/in² (kJ/m²)	
-22°f (-30°c)	12 (25)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	36 (75)	55 (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)	16200 (112)	--	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	226 (108)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	194 (90.0)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	295 (146)	--	°F (°C)	ISO 306/B50
--	401 (205)	--	°F (°C)	ISO 306/A50
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Burning Rate				
0.0787 In (2.00 Mm)	0.79 (20)	--	in/min (mm/min)	ISO 3795
0.0787 In (2.00 Mm)	0.79 (20)	--	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)	1290 (700)	--	°F (°C)	
0.12 In (3.0 Mm)	1290 (700)	--	°F (°C)	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.06 In (1.5 Mm)	1340 (725)	--	°F (°C)	
0.12 In (3.0 Mm)	1340 (725)	--	°F (°C)	

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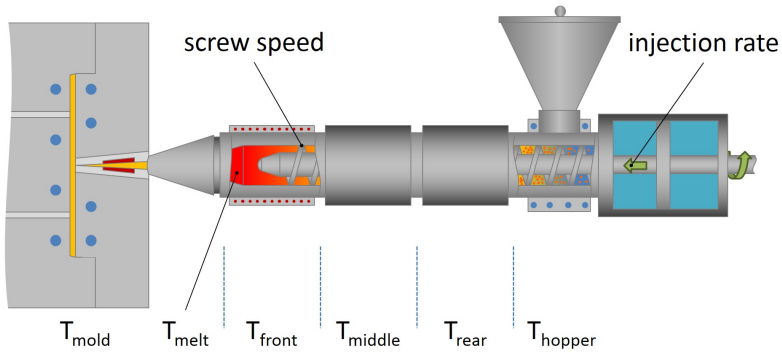

Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Processing (Melt) Temp	446 to 518 °F	230 to 270 °C
Mold Temperature	122 to 194 °F	50 to 90 °C

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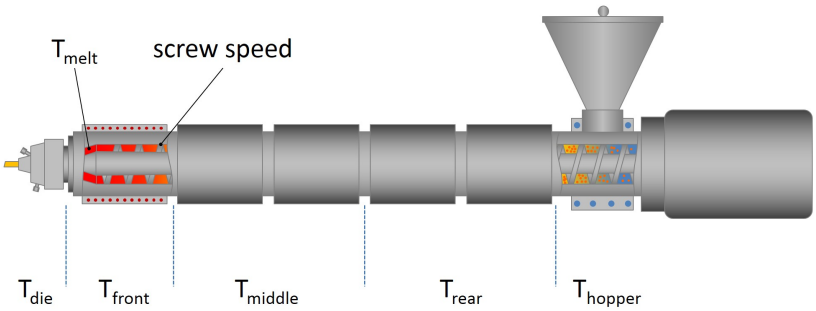

Extrusion	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Melt Temperature	482 to 518 °F	250 to 270 °C

Notes

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

Notes

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