

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

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
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/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (245°C/5.0 kg)	10	--	cm ³ /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/in ² (kJ/m ²)	
-22°F (-30°C)	12 (25)	--	ft-lb/in ² (kJ/m ²)	
73°F (23°C)	36 (75)	55 (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)	16200 (112)	--	psi (MPa)	ISO 2039-1

Technical Data Sheet


Schulamid 612 FS 5003 MC

Polyamide 612
LyondellBasell Industries
Engineering Plastics

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)	

Technical Data Sheet



Schulamid 612 FS 5003 MC

Polyamide 612
LyondellBasell Industries
Engineering Plastics



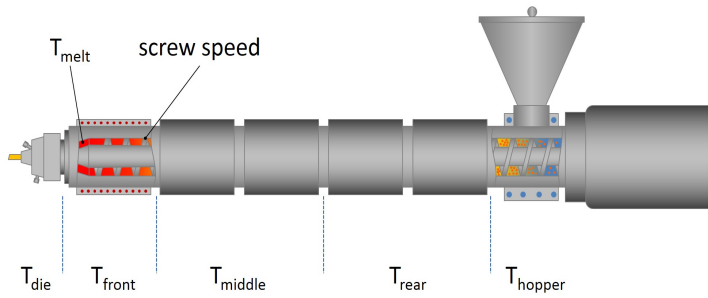
Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Processing (Melt) Temp	446 to 518 °F	230 to 270 °C
Mold Temperature	122 to 194 °F	50 to 90 °C

Technical Data Sheet



Schulamid 612 FS 5003 MC

Polyamide 612
LyondellBasell Industries
Engineering Plastics



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

Technical Data Sheet**Schulamid 612 FS 5003 MC**

Polyamide 612
LyondellBasell Industries
Engineering Plastics

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/>.

© LyondellBasell Industries Holdings, B.V. 2024

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.