



# Nymax™ X GMF 604 40 UV Black 148 rev 4

## Polyamide 6

### Key Characteristics

#### Product Description

The Nymax® GMF 600 Series of compounds are based upon nylon 6 resins and select combinations of glass fiber and mineral reinforcements offering a unique balance of physical property and part performance. These materials have been specifically formulated to offer ease of processing in most standard thermoplastic processing equipment.

#### General

Material Status	• Commercial: Active
Regional Availability	• Latin America • North America
Filler / Reinforcement	• Glass\Mineral, 40% Filler by Weight
Additive	• Heat Stabilizer • UV Stabilizer
Features	• General Purpose • Heat Stabilized
Uses	• Automotive Applications • Consumer Applications • Industrial Applications • Construction Applications • General Purpose
Automotive Specifications	• CHRYSLER MS-DB-41 CPN3916
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.48	1.48	ASTM D792
Density	1.49 g/cm <sup>3</sup>	1.49 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow	2.0E-3 to 4.0E-3 in/in	0.20 to 0.40 %	ASTM D955
Molding Shrinkage	0.20 to 0.30 %	0.20 to 0.30 %	ISO 294-4
Water Absorption (24 hr, 0.125 in (3.18 mm))	0.80 %	0.80 %	ASTM D570
Water Absorption (73°F (23°C), 24 hr)	1.0 %	1.0 %	ISO 62
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus	1.20E+6 psi	8270 MPa	ASTM D638
Tensile Modulus	1.23E+6 psi	8500 MPa	ISO 527-2
Tensile Strength <sup>2</sup> (Yield)	17500 psi	121 MPa	ASTM D638
Tensile Stress (Yield)	17000 psi	117 MPa	ISO 527-2
Tensile Strength <sup>2</sup> (Break)	17000 psi	117 MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break)	2.0 to 3.0 %	2.0 to 3.0 %	ASTM D638
Tensile Strain (Break)	2.5 %	2.5 %	ISO 527-2
Flexural Modulus	1.10E+6 psi	7580 MPa	ASTM D790
Flexural Modulus	1.22E+6 psi	8400 MPa	ISO 178
Flexural Strength	26000 psi	179 MPa	ASTM D790
Flexural Stress	27600 psi	190 MPa	ISO 178
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.3 ft-lb/in	69 J/m	
Notched Izod Impact Strength	6.0 ft-lb/in <sup>2</sup>	13 kJ/m <sup>2</sup>	ISO 180

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Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Heat Deflection Temperature			ISO 75-2/A
264 psi (1.8 MPa), Annealed	383 °F	195 °C	
Additional Information			
Molded Test Bars: Dry as Molded			

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	180 °F	82.2 °C
Drying Time	4.0 hr	4.0 hr
Suggested Max Moisture	0.10 to 0.20 %	0.10 to 0.20 %
Rear Temperature	500 to 530 °F	260 to 277 °C
Middle Temperature	525 to 550 °F	274 to 288 °C
Front Temperature	525 to 550 °F	274 to 288 °C
Nozzle Temperature	525 to 550 °F	274 to 288 °C
Mold Temperature	120 to 200 °F	48.9 to 93.3 °C

### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)

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