

Nymax™ GF 600 A 33 Black 28 V

Polyamide 6

Avient Corporation

PROSPECTOR®

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Technical Data

Product Description

The Nymax® GF 600 Series of glass fiber-reinforced Nylon 6 compounds have been specifically engineered for applications requiring high stiffness, tensile strength, and toughness, while providing enhanced surface appearance versus nylon 6/6 compounds. These materials are available in a broad range of reinforcement levels depending upon stiffness characteristics desired and have been formulated to offer ease of processing in most standard thermoplastic processing equipment.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
Search for UL Yellow Card	• Avient Corporation • Nymax™
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight
Features	• General Purpose • Heat Stabilized
Uses	• Automotive Applications • Construction Applications • Consumer Applications • General Purpose • Industrial Applications
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Nominal Value Unit	Test Method
Density / Specific Gravity	1.38 g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.10 to 0.30 %	ASTM D955
Water Absorption (24 hr, 23°C)	1.0 %	ISO 62

Mechanical

	Nominal Value Unit	Test Method
Tensile Modulus		
Injection Molded ^{3,4}	6150 MPa	ASTM D638
Injection Molded ^{3,5}	9870 MPa	ASTM D638
Injection Molded ⁴	5630 MPa	ISO 527-1/1
Injection Molded ⁵	9790 MPa	ISO 527-1/1
Tensile Strength		
Yield, Injection Molded ^{3,4}	80.5 MPa	ASTM D638
Yield, Injection Molded ^{3,5}	118 MPa	ASTM D638
Yield, Injection Molded ⁴	79.1 MPa	ISO 527-2/2
Yield, Injection Molded ⁵	123 MPa	ISO 527-2/2
Break, Injection Molded ^{3,4}	80.8 MPa	ASTM D638
Break, Injection Molded ^{3,5}	118 MPa	ASTM D638
Break, Injection Molded ⁴	79.3 MPa	ISO 527-2/2
Break, Injection Molded ⁵	122 MPa	ISO 527-2/2



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Mechanical	Nominal Value Unit	Test Method
Tensile Elongation		
Yield, Injection Molded ^{3,4}	3.9 %	ASTM D638
Yield, Injection Molded ^{3,5}	2.3 %	ASTM D638
Yield, Injection Molded ⁴	3.7 %	ISO 527-2/2
Yield, Injection Molded ⁵	2.2 %	ISO 527-2/2
Break, Injection Molded ^{3,4}	6.1 %	ASTM D638
Break, Injection Molded ^{3,5}	2.4 %	ASTM D638
Break, Injection Molded ⁴	6.2 %	ISO 527-2/2
Break, Injection Molded ⁵	2.3 %	ISO 527-2/2
Flexural Modulus		
Injection Molded ^{6,4}	5010 MPa	ASTM D790
Injection Molded ^{6,5}	8360 MPa	ASTM D790
Injection Molded ^{7,4}	6630 MPa	ISO 178
Injection Molded ^{7,5}	9850 MPa	ISO 178
Flexural Strength		
Injection Molded ^{6,4}	130 MPa	ASTM D790
Injection Molded ^{6,5}	191 MPa	ASTM D790
Injection Molded ^{7,4}	154 MPa	ISO 178
Injection Molded ^{7,5}	210 MPa	ISO 178
Impact		
Charpy Notched Impact Strength		ISO 179
-40°C, Injection Molded ⁴	9.5 kJ/m ²	
-40°C, Injection Molded ⁵	5.4 kJ/m ²	
-30°C, Injection Molded ⁴	7.8 kJ/m ²	
-30°C, Injection Molded ⁵	5.5 kJ/m ²	
23°C, Injection Molded ⁴	24 kJ/m ²	
23°C, Injection Molded ⁵	9.0 kJ/m ²	
Notched Izod Impact ⁵		
-40°C, Injection Molded	59 J/m	ASTM D256
-30°C, Injection Molded	67 J/m	ASTM D256
23°C, Injection Molded	110 J/m	ASTM D256
-40°C, Injection Molded	5.7 kJ/m ²	ISO 180
-30°C, Injection Molded	5.8 kJ/m ²	ISO 180
23°C, Injection Molded	10 kJ/m ²	ISO 180
Thermal		
Deflection Temperature Under Load		
0.45 MPa, Unannealed	213 °C	ISO 75-2/B
1.8 MPa, Unannealed	193 °C	ISO 75-2/A
Flammability		
Flame Rating		UL 94
0.79 mm	HB	
1.6 mm	HB	
3.2 mm	HB	



Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

³ 5.1 mm/min

⁴ Conditioned

⁵ Dry as Molded

⁶ 1.3 mm/min

⁷ 2.0 mm/min

