



Nymax™ GF 1200 A 33 HS Black 22

Polyamide 66

Key Characteristics

Product Description

The Nymax® GF 1200 Series of glass fiber-reinforced nylon 6/6 compounds have been specifically formulated for applications requiring high stiffness, tensile properties, heat resistance, and durability in harsh environments. 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 | | |
| Regional Availability | • North America | • South America | |
| Filler / Reinforcement | • Glass Fiber Reinforcement, 33% Filler by Weight | | |
| Additive | • Heat Stabilizer | | |
| Features | • General Purpose | • Heat Stabilized | |
| Uses | • Automotive Applications • Construction Applications | • Consumer Applications • General Purpose | • Industrial Applications |
| Automotive Specifications | • FORD ESE-M4D287-B | • GM GMP.PA66.013 | |
| Appearance | • Black | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

Technical Properties ¹

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|----------------------------|------------------------|-------------|
| Specific Gravity | 1.38 | 1.38 | ASTM D792 |
| Density | 1.40 g/cm ³ | 1.40 g/cm ³ | ISO 1183 |
| Molding Shrinkage - Flow | 0.0020 to 0.0040 in/in | 0.20 to 0.40 % | ASTM D955 |
| Molding Shrinkage | 0.20 to 0.40 % | 0.20 to 0.40 % | ISO 2577 |
| Water Absorption (24 hr, 0.125 in (3.18 mm)) | 1.0 % | 1.0 % | 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 | 1.25E+6 psi | 8620 MPa | ASTM D638 |
| Tensile Modulus | 9500 psi | 65.5 MPa | ISO 527-2 |
| Tensile Stress (Yield) | 165 psi | 1.14 MPa | ISO 527-2 |
| Tensile Strength ² (Break) | 28000 psi | 193 MPa | ASTM D638 |
| Tensile Elongation ² (Break) | 3.0 to 4.0 % | 3.0 to 4.0 % | ASTM D638 |
| Tensile Strain (Break) | 3.0 % | 3.0 % | ISO 527-2 |
| Flexural Modulus | 1.25E+6 psi | 8620 MPa | ASTM D790 |
| Flexural Modulus | 9000 psi | 62.1 MPa | ISO 178 |
| Flexural Strength | 36000 psi | 248 MPa | ASTM D790 |
| Flexural Strength | 240 psi | 1.65 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 | 2.00 ft-lb/in | 107 J/m | |
| Notched Izod Impact Strength | 7.50 ft-lb/in ² | 15.8 kJ/m ² | ISO 180 |

Copyright © 2008 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.

| Thermal | Typical Value (English) | Typical Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm) | 473 °F | 245 °C | ASTM D648 |
| Heat Deflection Temperature 264 psi (1.8 MPa), Annealed | 464 °F | 240 °C | ISO 75-2/A |
| Additional Properties | | | |
| Molded Test Bars: Dry as Molded | | | |

Notes

¹ Typical values are not to be construed as specifications.

² Type I, 0.20 in/min (5.1 mm/min)

CONTACT INFORMATION**Americas**

Argentina - Buenos Aires
+0054 11 4200 5917

Brasil - Campinas
+55 19 3206 0561

Mexico - Toluca
+52 722 2790200

United States - Avon Lake
+1 440 930 1000

Asia

China - Shenzhen
+86 (0) 755 2969 2888

China - Suzhou
+86 (0) 512 6823 24 38

India - Mumbai
+91 9820 194 220

Singapore - Singapore
+65 (0) 6861 9325

Europe

Germany - Gaggenau
+49 (0) 7225 6802 0

Spain - Barbastró (Huesca)
+34 (0) 9 7431 0314

Turkey - Cekmece-Istanbul-Türkiye
+90 (0) 212 549 2256

United Kingdom - Widnes
+44 (0) 05600 760 800



Beyond Polymers.

Better Business Solutions.™

www.polyone.com

PolyOne Americas

33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia

No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 (0) 21 5080 1188

PolyOne Europe

2 Rue Melville Wilson
5330 Assesse, Belgium
+32 (0) 83 660 211