



# OnForce™ LFT NY-30LGF/000 HS NATURAL

## Polyamide 6

### Key Characteristics

#### Product Description

PolyOne's Long Fiber Thermoplastic (LFT) compounds are formulated for demanding applications which require high stiffness and good impact such as metal replacement or other structural applications. These products exhibit enhanced physical and mechanical properties versus standard short fiber products. Benefits of LFT compounds include improved impact strength, elastic modulus, and material strength across wide temperature ranges from subambient to highly elevated. Furthermore, LFT compounds have been shown to offer improved performance in the areas of creep and fatigue performance, improved dimensional stability, and exhibit an exceptional surface finish when compared to traditional highly filled short fiber products.

#### General

|                        |  |                             |                 |
|------------------------|--|-----------------------------|-----------------|
| Material Status        | • Commercial: Active                     |                             |                 |
| Regional Availability  | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Filler / Reinforcement | • Long Glass Fiber, 30% Filler by Weight |                             |                 |
| Features               | • Heat Stabilized                        |                             |                 |
| RoHS Compliance        | • RoHS Compliant                         |                             |                 |
| Forms                  | • Pellets                                |                             |                 |

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

| Physical   | Typical Value (English)   | Typical Value (SI)     | Test Method |
|--|---------------------------|------------------------|-------------|
| Density  | 1.35 g/cm <sup>3</sup>    | 1.35 g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage  | 0.20 %                    | 0.20 %                 | ISO 294-4   |
| Mechanical   | Typical Value (English)   | Typical Value (SI)     | Test Method |
| Tensile Modulus  | 1.21E+6 psi               | 8350 MPa               | ISO 527-2   |
| Tensile Stress (Break)                                       | 24700 psi                 | 170 MPa                | ISO 527-2   |
| Tensile Strain (Break)                                       | 3.0 %                     | 3.0 %                  | ISO 527-2   |
| Flexural Modulus   | 1.19E+6 psi               | 8200 MPa               | ISO 178     |
| Flexural Stress  | 37700 psi                 | 260 MPa                | ISO 178     |
| Impact   | Typical Value (English)   | Typical Value (SI)     | Test Method |
| Charpy Notched Impact Strength                               | 7.1 ft·lb/in <sup>2</sup> | 15 kJ/m <sup>2</sup>   | ISO 179     |
| Charpy Unnotched Impact Strength                             | 40 ft·lb/in <sup>2</sup>  | 85 kJ/m <sup>2</sup>   | ISO 179     |
| Thermal  | Typical Value (English)   | Typical Value (SI)     | Test Method |
| Heat Deflection Temperature<br>264 psi (1.8 MPa), Unannealed | 428 °F                    | 220 °C                 | ISO 75-2/A  |

### Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 176 °F                  | 80.0 °C            |
| Drying Time            | 4.0 hr                  | 4.0 hr             |
| Processing (Melt) Temp | 500 to 536 °F           | 260 to 280 °C      |
| Mold Temperature       | 194 °F                  | 90.0 °C            |
| Injection Rate         | Slow-Moderate           | Slow-Moderate      |
| Back Pressure          | 725 psi                 | 5.00 MPa           |

#### Notes

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

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