# Ultramid® N-333 NF3001

## Polyamide 66

Ultramid N-333 NF3001 is a 33% glass reinforced, heat stabilized, injection molding PA66 uncolored.

## Applications

It is especially formulated for power steering reservoir applications.

| PHYSICAL | ISO Test Method | Property Value | |
|---|---|---|---|
| Density, g/cm³ | 1183 | 1.39 | |
| **Moisture, %** | 62 | | |
| (50% RH) | | 1.7 | |
| (Saturation) | | 5.7 | |
| **MECHANICAL** | **ISO Test Method** | **Dry** | **Conditioned** |
| **Tensile Modulus, MPa** | 527 | | |
| 23°C | | 11,000 | - |
| **Tensile stress at break, MPa** | 527 | | |
| 23°C | | 195 | - |
| **Tensile strain at break, %** | 527 | | |
| 23°C | | 3.0 | - |
| **Flexural Modulus, MPa** | 178 | | |
| 23°C | | 9,600 | - |
| **IMPACT** | **ISO Test Method** | **Dry** | **Conditioned** |
| **Izod Notched Impact, kJ/m²** | 180 | | |
| 23°C | | 12 | - |
| **Charpy Notched, kJ/m²** | 179 | | |

| | | | |
|---|---|---|---|
| 23°C | | 12 | - |

| THERMAL | ISO Test Method | Dry | Conditioned |
|---|---|---|---|
| Melting Point, °C | 3146 | 260 | - |
| HDT A, ° C | 75 | 255 | - |

# Processing Guidelines

**Material Handling**
Nylon 66 materials must be properly dried in order to provide parts with optimum strength and toughness. Nylon 66 materials are hygroscopic and will become degraded by excessive moisture during the injection molding Process. For unopened bag/box, dry at 60°C (140°F) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66°C (150°F) or until the moisture level is between 0.04 - 0.20%.

**Typical Profile**
Melt Temperature: 288-305°C (550-581°F)
Mold Temperature: 60-100°C (140-212°F)
Injection Pressure: 35-125 MPa (5000-18000 psi)

Back Pressure: 0-0.35 MPa (0-50 psi)
Screw RPM 40-80
Screw Compression Ratio:3:1-4:1

**Mold Temperatures**
This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 60-100°C (140-212°F) is recommended.

**Pressures**
Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

**Fill Rate**
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

# Note

**BASF Corporation**

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