# MEXMID B GF15 H NC

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|---|---|---|---|
| **Description** | Polyamide 6 medium viscosity with 15% glass fiber reinforced, heat stabilized | | |
| **Color** | Natural Color | **Additional formulations** | |
| **Processing** | Injection | HR - Resistance to hydrolysis | EL - High impact |
| **Norm** | - | Viscosity from 2.4 to 3.3 | IB - Hybrid Mineral+GF |
| **Norm** | - | UL94 - Flame | UV - Light stabilized |

**Applications:** Piezas exteriores, rejillas de radiador, manijas de puertas y componentes de motor parts. Piezas mecánicas de alta resistencia, componentes de carga y piezas de maquinaria.

| **Mechanical Properties** | **Values** | **Unit** | **ISO** |
|---|---|---|---|
| Density | 1.23 | g/cm³ | 1183 |
| Filler Content | 15 | % | 3451 |
| Reletive viscosity (1% in 96% $H_2SO_4$) | 2.7 ± 0.10 | - | 307 |
| Melting Point (DSC) | 222 | ° C | 3146 |
| **Mechanical Properties** | **Dry/Wet** | **Unit** | **ISO** |
| Tensile elongation at break | 3/15 | MPa | 527-2 |
| Tensile strength at break | 130/70 | MPa | 178 |
| Flexural Modulus | 5200/2700 | MPa | 178 |
| IZOD Impact strength, notched (23° C) | 8/16 | KJ/m² | 180 1eA |
| **Thermal Properties** | **Values** | **Unit** | **ISO** |
| HDT method A (1.820 MPa) | 190 | ° C | 75-1 |
| **Flammability** | **Values** | | |
| Flame rating at 3.2 mm | HB | | UL94 |

| **Processing Conditions** | | | | |
|---|---|---|---|---|
| Drying | 4-6h/90° C | Suggeste max moisture | 0.15 | % |
| Hopper | 260÷270° C | Min temperture | 270 | ° C |
| Front | 260÷270° C | Max temperture | 320 | ° C |
| Middle | 260÷270° C | Injection rate | High | |
| Rear | 260÷270° C | Injection pressure | 40 ÷ 120 | MPa |
| Nozzle | 265÷270° C | Injection time | 3 ÷ 15 | Sec. |
| Hot Runner Temp, | 270÷280° C | Screw Back | 3,5 | Bar |
| Moulds | 80 - 120° C | Cooling time | 30 ÷ 90 | Sec. |

Due to the high moisture absorption of PA6, special attention should be given to drying before processing. If the humidity exceeds 0.2%, it is recommended to dry in hot air at temperatures above 80° C for 8 hours. If the material has been exposed to the air for more than 8 hours, vacuum drying at 105° C for at least 8 hours is advised.

Melting Temperature: 260-280° C. For reinforced varieties, the melting temperature is 270-290° C.

Mold temperature significantly affects crystallinity, which, in turn, impacts the mechanical properties of the plastic parts. it is recommended to set the mold temperature at 80~90° C. For thin-walled, longer-flow plastic parts, such as the nylon cable tie production, a higher mold temperature is also recommended. Increasing the mold temperature can enhance the strength and rigidity of the plastic parts but reduces toughness.

Injection Pressure: Generally between 750-1250 bar (depending on the material and product design).

Injection Speed: High-speed (slightly reduced for reinforced materials).

Due to the short solidification time of PA6, the gate's position is crucial. The gate aperture should not be smaller than 0.5*t (where t is the thickness of the plastic part). If using a hot runner, the gate size should be slightly smaller than with a conventional runner, as the hot runner helps prevent premature solidification of the material. If using a submerged gate, the minimum diameter of the gate should be 0.75mm.