

## MEXMID A GF35 H NC

|                    |                                                                                |                                |                        |
|--------------------|--------------------------------------------------------------------------------|--------------------------------|------------------------|
| <b>Description</b> | Polyamide 66 medium viscosity with 35% glass fiber reinforced, heat stabilized |                                |                        |
| <b>Color</b>       | Natural Color                                                                  | <b>Additional formulations</b> |                        |
| <b>Processing</b>  | Injection                                                                      | HR - Resistance to hydrolysis  | EL - High impact       |
| <b>Norm</b>        | -                                                                              | Viscosity from 2.4 to 3.3      | IB - Hybrid Mineral+GF |
| <b>Norm</b>        | -                                                                              | UL94 - Flame                   | UV - Light stabilized  |

**Applications:** Lamp socket housings, cooling fans, insulating profile for aluminium window frames, water containers for automotive cooling systems, as well as electrically insulating parts.

| Mechanical Properties                                          | Values     | Unit              | ISO  |
|----------------------------------------------------------------|------------|-------------------|------|
| Density                                                        | 1.41       | g/cm <sup>3</sup> | 1183 |
| Filler Content                                                 | 30         | %                 | 3451 |
| Relative viscosity (1% in 96% H <sub>2</sub> SO <sub>4</sub> ) | 2.7 ± 0.10 | -                 | 307  |
| Melting Point (DSC)                                            | 262        | ° C               | 3146 |

| Mechanical Properties                 | Dry/Wet    | Unit              | ISO     |
|---------------------------------------|------------|-------------------|---------|
| Tensile elongation at break           | 3/5        | MPa               | 527-2   |
| Tensile strength at break             | 185/125    | MPa               | 178     |
| Flexural Modulus                      | 10000/8500 | MPa               | 178     |
| IZOD Impact strength, notched (23° C) | 0,9        | KJ/m <sup>2</sup> | 180 1eA |

| Thermal Properties       | Values | Unit | ISO  |
|--------------------------|--------|------|------|
| HDT method A (1.820 MPa) | 250    | ° C  | 75-1 |

| Flammability           | Values |      |
|------------------------|--------|------|
| Flame rating at 3.2 mm | HB     | UL94 |

| Processing Conditions | Values       |                                 |
|-----------------------|--------------|---------------------------------|
| Drying                | 4-6h/90° C   | Suggeste max moisture 0.15 %    |
| Hopper                | 270 ÷ 280° C | Min temperture 270 ° C          |
| Front                 | 280 ÷ 290° C | Max temperture 320 ° C          |
| Middle                | 280 ÷ 290° C | Injection rate High             |
| Rear                  | 295 ÷ 305° C | Injection pressure 40 ÷ 120 MPa |
| Nozzle                | 285 ÷ 300° C | Injection time 3 ÷ 15 Sec.      |
| Hot Runner Temp,      | 295 ÷ 320° 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: 280-300° C. For reinforced varieties, the melting temperature is 250-280° 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.

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