

# Ultramid® A3WG7 BK00564

Polyamide 66

BASF Corporation

## Message:

Ultramid A3WG7 BK00564 is a 35% glass fiber reinforced, pigmented black and heat resistance injection molding PA66 grade for machinery for industrial items.

### Applications

Typical applications include gear wheels, solenoid valve housings, cable attachments, automotive fuel distributors and components for automotive gear shift.

| General Information                   |                                   |                   |                  |
|---------------------------------------|-----------------------------------|-------------------|------------------|
| UL YellowCard                         | E36632-531633                     | E41871-233746     | E41871-101468836 |
| Filler / Reinforcement                | Glass Fabric,35% Filler by Weight |                   |                  |
| Features                              | High Heat Resistance              |                   |                  |
|                                       | Oil Resistant                     |                   |                  |
| Uses                                  | Automotive Applications           |                   |                  |
|                                       | Fuel Lines                        |                   |                  |
|                                       | Gears                             |                   |                  |
|                                       | Housings                          |                   |                  |
|                                       | Industrial Applications           |                   |                  |
|                                       | Valves/Valve Parts                |                   |                  |
| Agency Ratings                        | EC 1907/2006 (REACH)              |                   |                  |
| RoHS Compliance                       | RoHS Compliant                    |                   |                  |
| Appearance                            | Black                             |                   |                  |
| Forms                                 | Pellets                           |                   |                  |
| Processing Method                     | Injection Molding                 |                   |                  |
| Physical                              | Nominal Value                     | Unit              | Test Method      |
| Density                               | 1.41                              | g/cm <sup>3</sup> | ISO 1183         |
| Water Absorption                      |                                   |                   | ISO 62           |
| Saturation, 23°C                      | 5.0                               | %                 |                  |
| Equilibrium, 23°C, 50% RH             | 1.6                               | %                 |                  |
| Mechanical                            | Nominal Value                     | Unit              | Test Method      |
| Tensile Modulus (23°C)                | 11500                             | MPa               | ISO 527-2        |
| Tensile Stress (Break, 23°C)          | 200                               | MPa               | ISO 527-2        |
| Tensile Strain (Break, 23°C)          | 2.5                               | %                 | ISO 527-2        |
| Flexural Modulus (23°C)               | 10000                             | MPa               | ISO 178          |
| Impact                                | Nominal Value                     | Unit              | Test Method      |
| Charpy Notched Impact Strength (23°C) | 11                                | kJ/m <sup>2</sup> | ISO 179          |
| Notched Izod Impact Strength (23°C)   | 12                                | kJ/m <sup>2</sup> | ISO 180          |

| Thermal                                           | Nominal Value | Unit | Test Method |
|---------------------------------------------------|---------------|------|-------------|
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 250           | °C   | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 260           | °C   | ISO 3146    |
| Injection                                         | Nominal Value | Unit |             |
| Drying Temperature                                | 80.0          | °C   |             |
| Drying Time                                       | 2.0 to 4.0    | hr   |             |
| Suggested Max Moisture                            | 0.15          | %    |             |
| Processing (Melt) Temp                            | 280 to 305    | °C   |             |
| Mold Temperature                                  | 80.0 to 90.0  | °C   |             |
| Injection Pressure                                | 3.50 to 12.5  | MPa  |             |
| Injection Rate                                    | Fast          |      |             |

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