



## Ultramid® A3WG4

BASF Corporation - Polyamide 66

Monday, November 4, 2019

### General Information

#### Product Description

Ultramid A3WG4 is a 20% glass fiber reinforced heat stabilized injection molding PA66 grade.

#### General

|                        |                                     |
|------------------------|-------------------------------------|
| Material Status        | • Commercial: Active                |
| Availability           | • North America                     |
| Filler / Reinforcement | • Glass Fiber, 20% Filler by Weight |
| Additive               | • Heat Stabilizer                   |
| Features               | • Heat Stabilized                   |
| Agency Ratings         | • EC 1907/2006 (REACH)              |
| RoHS Compliance        | • RoHS Compliant                    |
| Forms                  | • Pellets                           |
| Processing Method      | • Injection Molding                 |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                          | Nominal Value | Unit                  | Test Method |
|---------------------------------------------------|---------------|-----------------------|-------------|
| Density                                           | 1.28          | g/cm <sup>3</sup>     | ISO 1183    |
| Molding Shrinkage                                 |               |                       | ISO 294-4   |
| Across Flow                                       | 1.2           | %                     |             |
| Flow                                              | 0.60          | %                     |             |
| Mechanical                                        | Nominal Value | Unit                  | Test Method |
| Tensile Modulus (73°F)                            | 1.05E+6       | psi                   | ISO 527-2   |
| Tensile Stress (Break, 73°F)                      | 21500         | psi                   | ISO 527-2   |
| Tensile Strain (Break, 73°F)                      | 2.7           | %                     | ISO 527-2   |
| Flexural Modulus (73°F)                           | 979000        | psi                   | ISO 178     |
| Flexural Stress (73°F)                            | 33800         | psi                   | ISO 178     |
| Impact                                            | Nominal Value | Unit                  | Test Method |
| Charpy Notched Impact Strength                    |               |                       | ISO 179     |
| -22°F                                             | 3.4           | ft-lb/in <sup>2</sup> |             |
| 73°F                                              | 3.5           | ft-lb/in <sup>2</sup> |             |
| Charpy Unnotched Impact Strength                  |               |                       | ISO 179     |
| -22°F                                             | 18            | ft-lb/in <sup>2</sup> |             |
| 73°F                                              | 20            | ft-lb/in <sup>2</sup> |             |
| Notched Izod Impact Strength                      |               |                       | ISO 180     |
| -40°F                                             | 3.2           | ft-lb/in <sup>2</sup> |             |
| 73°F                                              | 3.4           | ft-lb/in <sup>2</sup> |             |
| Thermal                                           | Nominal Value | Unit                  | Test Method |
| Heat Deflection Temperature (66 psi, Unannealed)  | 500           | °F                    | ISO 75-2/B  |
| Heat Deflection Temperature (264 psi, Unannealed) | 477           | °F                    | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 500           | °F                    | ISO 3146    |

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### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 176           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.15          | %    |
| Processing (Melt) Temp | 536 to 581    | °F   |
| Mold Temperature       | 176 to 194    | °F   |
| Injection Pressure     | 508 to 1810   | psi  |
| Injection Rate         | Fast          |      |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.