

# Ultramid® Structure A3WG13 LFX BK23215

Polyamide 66

BASF Corporation

## Message:

Ultramid Structure A3WG13 LFX BK23215 is a 65% long glass-fiber reinforced and heat aging resistant injection molding grade designed for applications requiring excellent strength and stiffness.

| General Information                               |       |                                        |                   |             |
|---------------------------------------------------|-------|----------------------------------------|-------------------|-------------|
| Filler / Reinforcement                            |       | Long glass fiber, 65% filler by weight |                   |             |
| Features                                          |       | Rigidity, high                         |                   |             |
|                                                   |       | High strength                          |                   |             |
|                                                   |       | Good heat aging resistance             |                   |             |
| Agency Ratings                                    |       | EC 1907/2006 (REACH)                   |                   |             |
| RoHS Compliance                                   |       | RoHS compliance                        |                   |             |
| Appearance                                        |       | Black                                  |                   |             |
| Forms                                             |       | Particle                               |                   |             |
| Processing Method                                 |       | Injection molding                      |                   |             |
| Physical                                          | Dry   | Conditioned                            | Unit              | Test Method |
| Density                                           | 1.78  | --                                     | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage                                 |       |                                        |                   | ISO 294-4   |
| Transverse flow                                   | 0.62  | --                                     | %                 | ISO 294-4   |
| Flow                                              | 0.39  | --                                     | %                 | ISO 294-4   |
| Mechanical                                        | Dry   | Conditioned                            | Unit              | Test Method |
| Tensile Modulus (23°C)                            | 23300 | 18200                                  | MPa               | ISO 527-2   |
| Tensile Stress (Break, 23°C)                      | 260   | 190                                    | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                      | 1.6   | 1.5                                    | %                 | ISO 527-2   |
| Flexural Modulus (23°C)                           | 22500 | 18900                                  | MPa               | ISO 178     |
| Flexural Stress (23°C)                            | 430   | 330                                    | MPa               | ISO 178     |
| Impact                                            | Dry   | Conditioned                            | Unit              | Test Method |
| Charpy Notched Impact Strength                    |       |                                        |                   | ISO 179     |
| -30°C                                             | 53    | 47                                     | kJ/m <sup>2</sup> | ISO 179     |
| 23°C                                              | 40    | 38                                     | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact Strength                  |       |                                        |                   | ISO 179     |
| -30°C                                             | 82    | 74                                     | kJ/m <sup>2</sup> | ISO 179     |
| 23°C                                              | 75    | 80                                     | kJ/m <sup>2</sup> | ISO 179     |
| Thermal                                           | Dry   | Conditioned                            | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) |       |                                        |                   |             |
|                                                   | 255   | --                                     | °C                | ISO 75-2/A  |

|                           |             |      |     |          |
|---------------------------|-------------|------|-----|----------|
| Melting Temperature (DSC) | 260         | --   | °C  | ISO 3146 |
| Injection                 | Dry         | Unit |     |          |
| Drying Temperature        | 83          |      | °C  |          |
| Drying Time               | 2.0 - 4.0   |      | hr  |          |
| Suggested Max Moisture    | 0.12        |      | %   |          |
| Processing (Melt) Temp    | 290 - 310   |      | °C  |          |
| Mold Temperature          | 80 - 100    |      | °C  |          |
| Injection Pressure        | 3.50 - 12.5 |      | MPa |          |
| Injection Rate            | Fast        |      |     |          |

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