



# Ultramid® Endure D3G7 BK20560

BASF Corporation - Polyamide 66

Monday, November 4, 2019

## General Information

### Product Description

Ultramid Endure D3G7 BK20560 is a glass fiber reinforced injection molding grade with high stiffness, very good flowability, and excellent heat aging resistance up to at least 220 degC (428 degF).

### General

|                        |                                                     |
|------------------------|-----------------------------------------------------|
| Material Status        | • Commercial: Active                                |
| Availability           | • North America                                     |
| Filler / Reinforcement | • Glass Fiber                                       |
| Features               | • Good Flow • Heat Aging Resistant • High Stiffness |
| Agency Ratings         | • EC 1907/2006 (REACH)                              |
| RoHS Compliance        | • RoHS Compliant                                    |
| Appearance             | • Black                                             |
| Forms                  | • Pellets                                           |
| Processing Method      | • Injection Molding                                 |

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

| Physical                         | Dry     | Conditioned | Unit                  | Test Method |
|----------------------------------|---------|-------------|-----------------------|-------------|
| Density                          | 1.43    | --          | g/cm <sup>3</sup>     | ISO 1183    |
| Molding Shrinkage                |         |             |                       | ISO 294-4   |
| Across Flow                      | 0.87    | --          | %                     |             |
| Flow                             | 0.30    | --          | %                     |             |
| Mechanical                       | Dry     | Conditioned | Unit                  | Test Method |
| Tensile Modulus                  |         |             |                       | ISO 527-2   |
| 73°F                             | 1.64E+6 | 1.10E+6     | psi                   |             |
| 302°F                            | 609000  | --          | psi                   |             |
| Tensile Stress                   |         |             |                       | ISO 527-2   |
| Break, 73°F                      | 29000   | 18900       | psi                   |             |
| Break, 302°F                     | 12200   | --          | psi                   |             |
| Tensile Strain                   |         |             |                       | ISO 527-2   |
| Break, 73°F                      | 2.9     | 5.1         | %                     |             |
| Break, 302°F                     | 6.7     | --          | %                     |             |
| Flexural Modulus (73°F)          | 1.54E+6 | 1.07E+6     | psi                   | ISO 178     |
| Flexural Stress (73°F)           | 43500   | 29000       | psi                   | ISO 178     |
| Impact                           | Dry     | Conditioned | Unit                  | Test Method |
| Charpy Notched Impact Strength   |         |             |                       | ISO 179     |
| -22°F                            | 5.1     | 6.6         | ft·lb/in <sup>2</sup> |             |
| 73°F                             | 4.9     | 6.4         | ft·lb/in <sup>2</sup> |             |
| Charpy Unnotched Impact Strength |         |             |                       | ISO 179     |
| -22°F                            | 29      | 29          | ft·lb/in <sup>2</sup> |             |
| 73°F                             | 38      | 43          | ft·lb/in <sup>2</sup> |             |
| Thermal                          | Dry     | Conditioned | Unit                  | Test Method |
| Heat Deflection Temperature      |         |             |                       | ISO 75-2/B  |
| 66 psi, Unannealed               | 500     | --          | °F                    |             |

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| Thermal                                            | Dry              | Conditioned | Unit     | Test Method |
|----------------------------------------------------|------------------|-------------|----------|-------------|
| Heat Deflection Temperature<br>264 psi, Unannealed | 464              | --          | °F       | ISO 75-2/A  |
| Melting Temperature (DSC)                          | 500              | --          | °F       | ISO 3146    |
| CLTE - Flow                                        | 7.8E-6 to 1.1E-5 | --          | in/in/°F |             |
| CLTE - Transverse                                  | 4.4E-5 to 7.2E-5 | --          | in/in/°F |             |
| Electrical                                         | Dry              | Conditioned | Unit     | Test Method |
| Volume Resistivity                                 | 3.0E+14          | 4.0E+10     | ohms·cm  | IEC 60093   |
| Electric Strength                                  | 1200             | 740         | V/mil    | IEC 60243-1 |
| Comparative Tracking Index                         | 250              | 225         | V        | IEC 60112   |

### Processing Information

| Injection              | Dry         | Unit |
|------------------------|-------------|------|
| Drying Temperature     | 176         | °F   |
| Drying Time            | 2.0 to 4.0  | hr   |
| Suggested Max Moisture | 0.12        | %    |
| Processing (Melt) Temp | 536 to 572  | °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.