

# Ultramid® B3ZG8 BK20560

## Polyamide 6



### Product Description

Ultramid B3ZG8 BK20560 is an impact-modified, pigmented black and 40% glass fiber reinforced injection molding PA6 grade having very high impact strength and rigidity.

### Applications

Typical applications include airbag housings and half-shells for suitcases.

| PHYSICAL                                 | ISO Test Method | Property Value |             |
|--|-----------------|----------------|-------------|
| Density, g/cm <sup>3</sup>               | 1183            | 1.42           |             |
| Moisture, %                              | 62              |                |             |
| (50% RH)                                 |                 | 1.6            |             |
| (Saturation)                             |                 | 5              |             |
| RHEOLOGICAL                              | ISO Test Method | Dry            | Conditioned |
| Melt Volume Rate (235 C/5 Kg), cc/10min. | 1133            | 4              | -           |
| MECHANICAL                               | ISO Test Method | Dry            | Conditioned |
| Tensile Modulus, MPa                     | 527             |                |             |
| 23C                                      |                 | 11,600         | 6,700       |
| Tensile stress at break, MPa             | 527             |                |             |
| 23C                                      |                 | 160            | 115         |
| Tensile strain at break, %               | 527             |                |             |
| 23C                                      |                 | 4.0            | 9.0         |
| Flexural Modulus, MPa                    | 178             |                |             |
| 23C                                      |                 | 9,500          | 6,100       |
| IMPACT                                   | ISO Test Method | Dry            | Conditioned |
| Izod Notched Impact, kJ/m <sup>2</sup>   | 180             |                |             |
| -30C                                     |                 | 14             | -           |
| 23C                                      |                 | 22             | -           |
| THERMAL                                  | ISO Test Method | Dry            | Conditioned |
| Melting Point, C                         | 3146            | 220            | -           |
| HDT A, C                                 | 75              | 205            | -           |
| HDT B, C                                 | 75              | 220            | -           |

### Processing Guidelines

#### Material Handling

Max. Water content: 0.08%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80C (176F) is recommended. Drying time is dependent on moisture level however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

#### Typical Profile

Melt Temperature 270-295C (518-563F)

Mold Temperature 80-95C (176-203F)

Injection and Packing Pressure 35-125 bar (500-1800psi)

Rear Zone 245-275C (473-527F)  
Center Zone 260-285C (500-545C)  
Front Zone 270-295C (518-563F)  
Nozzle 270-295C (518-563F)

### **Mold Temperatures**

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 80-95C (176-203F) is required.

### **Pressures**

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

### **Fill Rate**

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

### **Note**

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