

Ultramid® B3ZG7 BK20560

Polyamide 6



Product Description

Ultramid B3ZG7 BK20560 is a 35% glass reinforced, black, heat stabilized, impact modified PA6 injection molding grade.

| PHYSICAL | ISO Test Method | Property Value | |
|--|-----------------|----------------|-------------|
| Density, g/cm ³ | 1183 | 1.38 | |
| Moisture, % | 62 | | |
| (50% RH) | | 1.8 | |
| (Saturation) | | 6.0 | |
| RHEOLOGICAL | ISO Test Method | Dry | Conditioned |
| Melt Flow Rate (235 C/5 Kg), g/10min. | 1133 | 5.7 | - |
| MECHANICAL | ISO Test Method | Dry | Conditioned |
| Tensile Modulus, MPa | 527 | | |
| 23C | | 10,400 | - |
| Tensile stress at break, MPa | 527 | | |
| 23C | | 165 | - |
| Tensile strain at break, % | 527 | | |
| 23C | | 3.3 | - |
| Flexural Modulus, MPa | 178 | | |
| 23C | | 9,300 | - |
| IMPACT | ISO Test Method | Dry | Conditioned |
| Izod Notched Impact, kJ/m ² | 180 | | |
| -40C | | 16 | - |
| 23C | | 22 | - |
| Charpy Notched, kJ/m ² | 179 | | |
| -40C | | 17 | - |
| 23C | | 22 | - |
| Charpy Unnotched, kJ/m ² | 179 | | |
| -30C | | 100 | - |
| 23C | | 94 | - |
| THERMAL | ISO Test Method | Dry | Conditioned |
| Melting Point, C | 3146 | 220 | - |
| HDT A, C | 75 | 204 | - |
| HDT B, C | 75 | 218 | - |

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

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.