

Ultramid® B3ZG6 BK30564

Polyamide 6

Ultramid B3ZG6 BK30564 is an impact-modified, pigmented black, 30% glass fiber reinforced injection molding PA6 grade for industrial items having very high impact strength and rigidity.

Applications

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

| PHYSICAL | ISO Test Method | Property Value | |
|--|-----------------|----------------|-------------|
| Density, g/cm ³ | 1183 | 1.33 | |
| Moisture, % | 62 | | |
| (50% RH) | | 2 | |
| (Saturation) | | 6.2 | |
| RHEOLOGICAL | ISO Test Method | Dry | Conditioned |
| Melt Volume Rate (275 °C/5 Kg), cc/10min. | 1133 | 25 | - |
| MECHANICAL | ISO Test Method | Dry | Conditioned |
| Tensile Modulus, MPa | 527 | | |
| 23 °C | | 8,800 | - |
| Tensile stress at break, MPa | 527 | | |
| 23 °C | | 150 | - |
| Tensile strain at break, % | 527 | | |
| 23 °C | | 3.2 | - |
| Flexural Modulus, MPa | 178 | | |
| 23 °C | | 7,900 | - |
| IMPACT | ISO Test Method | Dry | Conditioned |
| Izod Notched Impact, kJ/m² | 180 | | |

| | | | |
|---|------------------------|------------|--------------------|
| -30°C | | 8 | - |
| 23°C | | 16 | - |
| Charpy Notched, kJ/m² | | 179 | |
| -30°C | | 8 | - |
| 23°C | | 15 | - |
| THERMAL | ISO Test Method | Dry | Conditioned |
| Melting Point, °C | 3146 | 220 | - |
| HDT A, °C | 75 | 205 | - |

Processing Guidelines

Material Handling

Max. Water content: 0.08%

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile

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

Mold Temperature 80-95°C (176-203°F)

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

Rear Zone 245-275°C (473-527°F)

Center Zone 260-285°C (500-545°C)

Front Zone 270-295°C (518-563°F)

Nozzle 270-295°C (518-563°F)

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 80-95°C (176-203°F) 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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