Product Information

Aug 2017

# Ultramid® A3WG8 BK20560
## Polyamide 66

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### Product Description

Ultramid A3WG8 BK20560 is a 40% glass fiber reinforced, pigmented black PA66. This grade offers excellent heat resistance and high strength. It is designed for industrial applications requiring excellent strength and stiffness.

### Applications

Typical applications include gear wheels, solenoid valve housings, cable attachments, automotive fuel distributors, pedals and components for automotive gear shifts.

| PHYSICAL | ISO Test Method | Property Value | |
|---|---|---|---|
| Density, g/cm³ | 1183 | 1.46 | |
| Moisture, % | 62 | | |
| (50% RH) | | 1.5 | |
| **MECHANICAL** | **ISO Test Method** | **Dry** | **Conditioned** |
| Tensile Modulus, MPa | 527 | | |
| 23C | | 13,200 | - |
| Tensile stress at break, MPa | 527 | | |
| 23C | | 220 | - |
| Tensile strain at break, % | 527 | | |
| 23C | | 3.0 | - |
| Flexural Modulus, MPa | 178 | | |
| 23C | | 12,000 | - |
| **IMPACT** | **ISO Test Method** | **Dry** | **Conditioned** |
| Izod Notched Impact, kJ/m² | 180 | | |
| -40C | | 12 | - |
| 23C | | 14 | - |
| Charpy Notched, kJ/m² | 179 | | |
| -30C | | 11 | - |
| 23C | | 13 | - |
| Charpy Unnotched, kJ/m² | 179 | | |
| -30C | | 83 | - |
| 23C | | 95 | - |
| **THERMAL** | **ISO Test Method** | **Dry** | **Conditioned** |
| Melting Point, C | 3146 | 260 | - |
| HDT A, C | 75 | 250 | - |
| HDT B, C | 75 | 260 | - |

### Processing Guidelines

**Material Handling**
Max. Water content: 0.15%

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: http://www.plasticsportal.com/usa

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. Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

**Typical Profile**
Melt Temperature 280-305C (536-581F)
Mold Temperature 80-90C (176-194F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

**Mold Temperatures**
A mold temperature of 80-90C (176-194F) is recommended, however temperatures of as low as 45C (113F) and as high as 105C (221F) can be used where applicable.

**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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