

## Ultramid® A3WZG3 R01 BK3007 Polyamide 66

Ultramid A3WZG3 R01 BK3007 (Formerly Ultramid 7423-2 BK ND3007) is an impact modified, pigmented black, 13% glass reinforced, heat stabilized injection molding PA6/6.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm <sup>3</sup>	1183	1.18	
MECHANICAL	ISO Test Method	Dry	Conditioned
<b>Tensile Modulus, MPa</b>	527		
23°C		5,100	4,000
<b>Tensile stress at break, MPa</b>	527		
23°C		110	86
<b>Tensile strain at break, %</b>	527		
23°C		6.0	10
<b>Flexural Modulus, MPa</b>	178		
23°C		4,700	3,500
IMPACT	ISO Test Method	Dry	Conditioned
<b>Izod Notched Impact, kJ/m<sup>2</sup></b>	180		
23°C		11	14
<b>Charpy Notched, kJ/m<sup>2</sup></b>	179		
-30°C		5	5
23°C		10	14
<b>Charpy Unnotched, kJ/m<sup>2</sup></b>	179		
-30°C		55	81
23°C		65	83

THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	260	-
HDT A, ° C	75	240	-
HDT B, ° C	75	256	-

## Processing Guidelines

### Material Handling

Nylon 66 materials must be properly dried in order to provide parts with optimum strength and toughness. Nylon 66 materials are hygroscopic and will become degraded by excessive moisture during the injection molding Process. For unopened bag/box, dry at 60°C (140°F) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66°C (150°F) or until the moisture level is between 0.04 - 0.20%.

### Typical Profile

Melt Temperature: 288-305°C (550-581°F)

Mold Temperature: 60-100°C (140-212°F)

Injection Pressure: 35-125 MPa (5000-18000 psi)

Back Pressure: 0-0.35 MPa (0-50 psi)

Screw RPM 40-80

Screw Compression Ratio:3:1-4:1

### 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 60-100°C (140-212°F) is recommended.

### 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.

### Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

## 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.

## **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>