

# Ultramid® B3WG13 BK00102

## Polyamide 6

### Product Description

Ultramid B3WG13 BK00102 is a 63% glass reinforced, injection molding, high modulus nylon designed to have high strength and stiffness for metal replacement applications. It also has excellent moldability and outstanding surface appearance.

### Applications

Potential applications are mirror brackets, fuel lids, gas-assisted steering wheel inserts, ski bindings and bike rack clamps.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm <sup>3</sup>	1183	1.74	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		22,000	13,400
Tensile stress at break, MPa	527		
23°C		235	155
Tensile strain at break, %	527		
23°C		2.0	-
Flexural Strength, MPa	178		
23°C		355	-
Flexural Modulus, MPa	178		
23°C		19,000	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m <sup>2</sup>	180		
23°C		15	-
Charpy Notched, kJ/m <sup>2</sup>	179		
-30°C		13	-
23°C		15	-
Charpy Unnotched, kJ/m <sup>2</sup>	179		
-30°C		90	-
23°C		90	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, °C	75	214	-

### Processing Guidelines

#### Material Handling

Max. Water content: 0.12%

Although Product is supplied in sealed containers, drying is recommended in applications requiring optimum surface aesthetics. A dehumidifying or desiccant dryer operating at 80°C (176°F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Recommended water content for molding is 0.08%-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 300-320°C (572-608°F)

Mold Temperature 80-95°C (176-203°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Rear Zone 275-300°C (527-572°F)

Center Zone 285-310°C (545-590°F)

Front Zone 300-320°C (572-608°F)

Nozzle 300-320°C (572-608°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. recommended to minimize glass fiber 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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