

Product Information

Oct 2016

Ultramid® B3WG13 BK00102 Polyamide 6


[Email PDF Datasheet](#) | [Print/Save Version](#)
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	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.74	
Mold Shrinkage (1/8" bar, in/in)		0.002	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Break, MPa (psi)	D-638		
23°C (73°F)		207 (30,000)	-
Elongation, Break, %	D-638		
23°C (73°F)		3	-
Flexural Modulus, MPa (psi)	D-790		
23°C (73°F)		17,300 (2,510,000)	-
Flexural Strength, MPa (psi)	D-790		
23°C (73°F)		378 (54,800)	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23°C (73°F)		155 (2.9)	-
THERMAL	ASTM Test Method	Dry	Conditioned
Melting Point, °C(°F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) °C(°F)	D-648	213 (415)	-

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

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.

Wyandotte, MI 48192

