



# Ultramid® B3WG13 BK00102

BASF Corporation - Polyamide 6

Monday, November 4, 2019

## General Information

### 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.

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

### General

Material Status	• Commercial: Active		
Availability	• North America		
Filler / Reinforcement	• Glass Fiber, 63% Filler by Weight		
Features	• Good Moldability • High Stiffness	• High Strength • Oil Resistant	• Pleasing Surface Appearance
Uses	• Automotive Applications	• Metal Replacement	• Sporting Goods
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

## ASTM & ISO Properties <sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density / Specific Gravity	1.74	--		ASTM D792
Density	1.74	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow (0.125 in)	2.0E-3	--	in/in	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	3.19E+6	1.94E+6	psi	ISO 527-2
Tensile Strength (Break, 73°F)	30000	--	psi	ASTM D638
Tensile Stress (Break, 73°F)	34100	22500	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	3.0	--	%	ASTM D638
Tensile Strain (Break, 73°F)	2.0	--	%	ISO 527-2
Flexural Modulus (73°F)	2.51E+6	--	psi	ASTM D790
Flexural Modulus (73°F)	2.76E+6	--	psi	ISO 178
Flexural Strength (73°F)	54800	--	psi	ASTM D790
Flexural Stress (73°F)	51500	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	6.2	--	ft·lb/in <sup>2</sup>	
73°F	7.1	--	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179
-22°F	43	--	ft·lb/in <sup>2</sup>	
73°F	43	--	ft·lb/in <sup>2</sup>	
Notched Izod Impact (73°F)	2.9	--	ft·lb/in	ASTM D256
Notched Izod Impact Strength				ISO 180
73°F	7.1	--	ft·lb/in <sup>2</sup>	

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	415	--	°F	ASTM D648
Heat Deflection Temperature 264 psi, Unannealed	417	--	°F	ISO 75-2/A
Peak Melting Temperature	428	--	°F	ASTM D3418
Melting Temperature (DSC)	428	--	°F	ISO 3146

### Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.12	%
Rear Temperature	527 to 572	°F
Middle Temperature	545 to 590	°F
Front Temperature	572 to 608	°F
Nozzle Temperature	572 to 608	°F
Processing (Melt) Temp	572 to 608	°F
Mold Temperature	176 to 203	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.