



Ultramid® B3WM8 BK00102

BASF Corporation - Polyamide 6

Monday, November 4, 2019

General Information

Product Description

Ultramid B3WM8 BK00102 is a heat stabilized, pigmented black, 40% mineral reinforced PA6 injection molding resin. It possesses high stiffness, dimensional stability and heat resistance combined with excellent processability including low warp and resistance to sink-mark formation. It maintains its inherent chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid B3WM8 BK00102 is generally recommended for applications such as marine hardware, brackets, fittings, bobbins, office furniture, appliance components, and power tool housings.

General

Material Status	• Commercial: Active		
Availability	• North America		
Filler / Reinforcement	• Mineral, 40% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Chemical Resistant • Excellent Processability • Grease Resistant • Heat Stabilized	• High Dimensional Stability • High Heat Resistance • High Stiffness • Hydrocarbon Resistant	• Low Warpage • Oil Resistant
Uses	• Appliance Components • Bobbins • Fittings	• Furniture • Housings • Marine Applications	• Power/Other Tools
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD WSK-M4D667-A	• GM GMW8694P-PA6-M40H Color: Black	• GM GMW8694P-PA6-M40H Color: Natural
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density / Specific Gravity	1.49	--		ASTM D792
Density	1.49	--	g/cm ³	ISO 1183
Water Absorption (24 hr)	1.1	--	%	ASTM D570
Water Absorption (24 hr, 73°F)	1.1	--	%	ISO 62
Water Absorption (Saturation)	5.7	--	%	ASTM D570
Water Absorption Saturation, 73°F	5.7	--	%	ISO 62
Water Absorption Equilibrium, 50% RH	1.6	--	%	ASTM D570
Water Absorption Equilibrium, 73°F, 50% RH	1.6	--	%	ISO 62

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
-40°F	1.21E+6	1.12E+6	psi	
73°F	928000	551000	psi	
176°F	197000	203000	psi	
248°F	141000	174000	psi	
302°F	132000	122000	psi	
Tensile Stress				ISO 527-2
Break, -40°F	19600	19600	psi	
Break, 73°F	12300	8700	psi	
Break, 176°F	5800	5080	psi	
Break, 248°F	4350	3920	psi	
Break, 302°F	2900	2900	psi	
Tensile Strain				ISO 527-2
Break, -40°F	6.0	5.0	%	
Break, 73°F	10	30	%	
Break, 176°F	35	30	%	
Break, 248°F	40	40	%	
Break, 302°F	40	60	%	
Flexural Modulus (73°F)	754000	305000	psi	ISO 178
Flexural Stress (73°F)	20300	7250	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
73°F	1.4	--	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
73°F	62	--	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180
73°F	2.9	--	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	374	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	194	--	°F	
Peak Melting Temperature	428	--	°F	ASTM D3418
Melting Temperature (DSC)	428	--	°F	ISO 3146
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0591 in)	> 1.0E+15	--	ohms·cm	ASTM D257
Volume Resistivity	> 1.0E+15	--	ohms·cm	IEC 60093

Processing Information

Injection	Dry	Unit
Drying Temperature	181	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	518 to 563	°F
Mold Temperature	176 to 203	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

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Notes

¹ Typical properties: these are not to be construed as specifications.