



Ultramid® A3WG8 BK20560

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3WG8 BK20560 is a 40% glass fiber reinforced, pigmented black PA66. This grade offers excellent heat resistance and high strength. It is designed for industrial applications requiring excellent strength and stiffness.

Applications

Typical applications include gear wheels, solenoid valve housings, cable attachments, automotive fuel distributors, pedals and components for automotive gear shifts.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fabric, 40% Filler by Weight
Features	• High Heat Resistance • High Strength • High Stiffness • Oil Resistant
Uses	• Automotive Applications • Gears • Industrial Applications • Fuel Lines • Housings
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.46	g/cm ³	ISO 1183
Water Absorption (Equilibrium, 73°F, 50% RH)	1.5	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	1.91E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	31900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	%	ISO 527-2
Flexural Modulus (73°F)	1.74E+6	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	5.2	ft·lb/in ²	
73°F	6.2	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179
-22°F	39	ft·lb/in ²	
73°F	45	ft·lb/in ²	
Notched Izod Impact Strength			ISO 180
-40°F	5.7	ft·lb/in ²	
73°F	6.7	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	500	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	482	°F	ISO 75-2/A
Melting Temperature (DSC)	500	°F	ISO 3146

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	536 to 581	°F
Mold Temperature	176 to 194	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

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