



Ultramid® A3W BK00464

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3W BK00464 is an easy flowing, pigmented black, heat aging resistant injection molding PA66 grade for fast processing.

Applications

Typical applications include highly stressed parts such as bearings, bearing cages, gear-wheels, coil formers and cable connectors.

General

Material Status	• Commercial: Active
Availability	• North America
Features	• Fast Molding Cycle • Good Flow • Heat Aging Resistant • Oil Resistant
Uses	• Bearings • Connectors • Gears
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• FORD WSK-M4D648-A • FORD WSK-M4D648-A2 • FORD WSS-M4D648-B1 • FORD WSS-M4D648-B2
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.14		ASTM D792
Density	1.14	g/cm ³	ISO 1183
Water Absorption (Saturation)	8.5	%	ASTM D570
Water Absorption (Saturation, 73°F)	8.5	%	ISO 62
Water Absorption (Equilibrium, 50% RH)	2.8	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	2.8	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	479000	psi	ISO 527-2
Tensile Strength (Yield, 73°F)	12300	psi	ASTM D638
Tensile Stress (Yield, 73°F)	12800	psi	ISO 527-2
Tensile Elongation (Yield, 73°F)	4.5	%	ASTM D638
Tensile Strain (Yield, 73°F)	4.7	%	ISO 527-2
Flexural Modulus (73°F)	450000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	1.4	ft-lb/in ²	
73°F	2.2	ft-lb/in ²	
Notched Izod Impact			ASTM D256
-40°F	0.90	ft-lb/in	
73°F	0.99	ft-lb/in	

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180
-40°F	1.9	ft·lb/in²	
73°F	2.1	ft·lb/in²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	410	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	167	°F	ISO 75-2/A
Peak Melting Temperature	500	°F	ASTM D3418
Melting Temperature (DSC)	500	°F	ISO 3146
RTI Elec			UL 746
0.030 in	266	°F	
0.06 in	266	°F	
0.12 in	266	°F	
0.24 in	266	°F	
RTI Imp			UL 746
0.030 in	221	°F	
0.06 in	221	°F	
0.12 in	221	°F	
0.24 in	221	°F	
RTI Str			UL 746
0.030 in	221	°F	
0.06 in	221	°F	
0.12 in	230	°F	
0.24 in	230	°F	
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.030 in	V-2		
0.06 in	V-2		
0.12 in	V-2		
0.24 in	V-2		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.20	%
Processing (Melt) Temp	536 to 572	°F
Mold Temperature	104 to 176	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

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