

Ultramid® A3Z HP UV

BASF Corporation - Polyamide 66

Monday, November 4, 2019

Product Description

Processing Method

Ultramid A3Z HP UV is an impact modified PA66 containing heat and ultraviolet light stabilizers. Designed for maximum toughness at low temperatures, Ultramid A3Z HP UV offers a unique combination of impact performance and excellent processability.

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Material Status	 Commercial: Active 		
Availability	North America		
Additive	Heat Stabilizer	Impact Modifier	UV Stabilizer
Features	Excellent ProcessabilityGood Impact ResistanceHeat Stabilized	Impact ModifiedLow Temperature ToughnessOil Resistant	UV Stabilized
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Automotive Specifications	FORD WSK-M4D666-AFORD WSS-M4D666-A2	 GM GMP.PA66.074 Color: Natural GM GMP.PA66.078 Color: Natural 	GM GMW16558P-PA66-T2 Color: Natural
Forms	Pellets		

ASTM & ISO Properties 1

· Injection Molding

Tensile Modulus (73°F) 261000 psi ISO 527-2 Tensile Stress (Yield, 73°F) 6820 psi ISO 527-2 Nominal Tensile Strain at Break (73°F) 66 % ISO 527-2 Flexural Modulus (73°F) 257000 psi ISO 178 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength ISO 179 ISO 179 -22°F 9.5 ft·lb/in² ISO 179 Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength ISO 180 ISO 180 -40°F 10 ft·lb/in² ISO 180 73°F 38 ft·lb/in² ISO 180	Physical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F) 261000 psi ISO 527-2 Tensile Stress (Yield, 73°F) 6820 psi ISO 527-2 Nominal Tensile Strain at Break (73°F) 66 % ISO 527-2 Flexural Modulus (73°F) 257000 psi ISO 178 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 9.5 ft·lb/in² ISO 179 -22°F 9.5 ft·lb/in² ISO 179 Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength 10 ft·lb/in² ISO 180 -40°F 10 ft·lb/in² ISO 180 73°F 38 ft·lb/in² Test Method Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Density	1.07	g/cm³	ISO 1183
Tensile Stress (Yield, 73°F) 6820 psi ISO 527-2 Nominal Tensile Strain at Break (73°F) 66 % ISO 527-2 Flexural Modulus (73°F) 257000 psi ISO 178 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength ISO 179 -22°F 9.5 ft·lb/in² 73°F 40 ft·lb/in² ISO 179 Notched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength ISO 180 ISO 180 -40°F 10 ft·lb/in² The Ib/in² 73°F 38 ft·lb/in² Test Method Heat Deflection Temperature (264 psi, Unannealed) Nominal Value Unit Test Method	Mechanical	Nominal Value	Unit	Test Method
Nominal Tensile Strain at Break (73°F) 66 % ISO 527-2 Flexural Modulus (73°F) 257000 psi ISO 178 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength ISO 179 ISO 179 -22°F 9.5 ft·lb/in² ft·lb/in² 73°F 40 ft·lb/in² ISO 179 Notched Impact Strength ISO 179 ISO 180 -40°F 10 ft·lb/in² ISO 180 73°F 38 ft·lb/in² ISO 180 Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Tensile Modulus (73°F)	261000	psi	ISO 527-2
Flexural Modulus (73°F) 257000 psi ISO 178 Impact Nominal Value Unit Test Method	Tensile Stress (Yield, 73°F)	6820	psi	ISO 527-2
Impact Nominal Value Unit Test Method Charpy Notched Impact Strength	Nominal Tensile Strain at Break (73°F)	66	%	ISO 527-2
Charpy Notched Impact Strength ISO 179 -22°F 9.5 ft·lb/in² 73°F 40 ft·lb/in² Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² Notched Izod Impact Strength ISO 179 -40°F 10 ft·lb/in² 73°F 38 ft·lb/in² Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Flexural Modulus (73°F)	257000	psi	ISO 178
-22°F 9.5 ft·lb/in² 73°F 40 ft·lb/in² Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength 10 ft·lb/in² ISO 180 -40°F 10 ft·lb/in² 10 ft·lb/in² 73°F 38 ft·lb/in² Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Impact	Nominal Value	Unit	Test Method
73°F 40 ft·lb/in² Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength	Charpy Notched Impact Strength			ISO 179
Charpy Unnotched Impact Strength (73°F) 130 ft·lb/in² ISO 179 Notched Izod Impact Strength	-22°F	9.5	ft·lb/in²	
Notched Izod Impact Strength	73°F	40	ft·lb/in²	
-40°F 10 ft·lb/in² 73°F 38 ft·lb/in² Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Charpy Unnotched Impact Strength (73°F)	130	ft·lb/in²	ISO 179
73°F 38 ft·lb/in² Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	Notched Izod Impact Strength			ISO 180
Thermal Nominal Value Unit Test Method Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	-40°F	10	ft·lb/in²	
Heat Deflection Temperature (264 psi, Unannealed) 142 °F ISO 75-2/A	73°F	38	ft·lb/in²	
	Thermal	Nominal Value	Unit	Test Method
Melting Temperature (DSC) 500 °F ISO 3146	Heat Deflection Temperature (264 psi, Unannealed)	142	°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	0.20	%	
Processing (Melt) Temp	536 to 579	°F	
Mold Temperature	140 to 212	°F	
Injection Pressure	508 to 1810	psi	
Back Pressure	0.00 to 50.8	psi	
Screw Speed	40 to 80	rpm	
Screw Compression Ratio	3.0:1.0 to 4.0:1.0		

Notes

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