



Ultramid® A3Z HP UN

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3Z HP UN is an unreinforced, impact modified, heat stabilized, high flow PA66 injection molding grade. Ultramid A3Z HP UN offers a unique combination of maximum toughness and impact resistance with excellent high flow processability.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Heat Stabilizer • Impact Modifier
Features	• Good Processability • High Flow • Good Toughness • High Impact Resistance • Oil Resistant • Heat Stabilized • Impact Modified
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.07	--	g/cm ³	ISO 1183
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	276000	154000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	7250	--	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	5.0	--	%	ISO 527-2
Nominal Tensile Strain at Break 73°F	45	> 50	%	ISO 527-2
Flexural Modulus (73°F)	261000	128000	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	13	9.0	ft·lb/in ²	
73°F	43	54	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180
-40°F	11	8.6	ft·lb/in ²	
73°F	38	47	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	338	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	147	--	°F	ISO 75-2/A
Melting Temperature (DSC)	500	--	°F	ISO 3146

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Thermal	Dry	Conditioned	Unit	Test Method
RTI Elec				UL 746
0.030 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746
0.030 in	221	--	°F	
0.12 in	221	--	°F	
RTI Str				UL 746
0.030 in	230	--	°F	
0.12 in	230	--	°F	
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.12 in	HB	--		

Processing Information

Injection	Dry	Unit
Drying Temperature	140	°F
Drying Time	1.0 to 2.0	hr
Suggested Max Moisture	0.040 to 0.20	%
Processing (Melt) Temp	550 to 581	°F
Mold Temperature	140 to 212	°F
Injection Pressure	5000 to 18000	psi
Injection Rate	Fast	
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.