



Ultramid® A3XZG5

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3XZG5 is an impact-modified, 25% glass fiber reinforced injection molding PA66 grade with improved flame retardance. Flame retardant based on red phosphorus.

Applications

Typical applications include components with high stiffness, dimensional stability and enhanced impact strength such as electrical switches.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight
Additive	• Flame Retardant [Red phosphorus] • Impact Modifier
Features	• Flame Retardant • High Dimensional Stability • Impact Modified • Good Impact Resistance • High Stiffness • Oil Resistant
Uses	• Electrical Parts • Switches
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• FMVSS 302 ¹
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ²

Physical	Dry	Conditioned	Unit	Test Method
Density	1.32	--	g/cm ³	ISO 1183
Water Absorption				ISO 62
Saturation, 73°F	5.0	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	943000	653000	psi	ISO 527-2
Tensile Stress (Break, 73°F)	15200	10200	psi	ISO 527-2
Tensile Strain (Break, 73°F)	6.0	11	%	ISO 527-2
Flexural Modulus (73°F)	798000	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
73°F	12	14	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
73°F	43	48	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	482	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	464	--	°F	
Melting Temperature (DSC)	500	--	°F	ISO 3146

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Thermal	Dry	Conditioned	Unit	Test Method
RTI Elec				UL 746
0.030 in	248	--	°F	
0.06 in	248	--	°F	
0.12 in	248	--	°F	
RTI Imp				UL 746
0.030 in	239	--	°F	
0.06 in	239	--	°F	
0.12 in	239	--	°F	
RTI Str				UL 746
0.06 in	266	--	°F	
0.12 in	266	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Constant (1 MHz)	3.80	--		IEC 60250
Dissipation Factor (1 MHz)	0.020	0.030		IEC 60250
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	V-0	--		
0.12 in	• V-0	--		
	• 5VA	--		

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.050	%
Processing (Melt) Temp	545 to 572	°F
Mold Temperature	176 to 194	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

¹ Thickness >= 1mm

² Typical properties: these are not to be construed as specifications.