



Ultramid® A3HG2

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3HG2 is a 10% glass fiber reinforced injection molding PA66 grade.

Applications

Typical applications include machinery components and housings of medium stiffness, as well as electrically insulating parts.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • North America
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight
Features	• Electrically Insulating • Medium Stiffness • Oil Resistant
Uses	• Electrical Parts • Housings • Machine/Mechanical Parts
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 / Specific Gravity	1.20	--		ASTM D792
Density	1.20	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR)				ISO 1133
275°C/5.0 kg	80	--	cm ³ /10min	
Molding Shrinkage - Flow (0.125 in)	8.0E-3	--	in/in	
Water Absorption (Saturation)	7.0	--	%	ASTM D570
Water Absorption				ISO 62
Saturation, 73°F	7.0	--	%	
Water Absorption				ASTM D570
Equilibrium, 50% RH	2.1	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.1	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	667000	377000	psi	ISO 527-2
Tensile Strength (Break, 73°F)	14500	--	psi	ASTM D638
Tensile Stress (Break, 73°F)	14500	8700	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	3.0	--	%	ASTM D638
Tensile Strain (Break, 73°F)	3.0	12	%	ISO 527-2
Flexural Modulus (73°F)	650000	--	psi	ASTM D790
Flexural Modulus (73°F)	650000	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
73°F	3.3	4.3	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
73°F	14	44	ft·lb/in ²	

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Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact (73°F)	0.99	--	ft·lb/in	ASTM D256
Notched Izod Impact Strength 73°F	2.6	--	ft·lb/in ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	410	--	°F	ASTM D648
Heat Deflection Temperature 264 psi, Unannealed	410	--	°F	ISO 75-2/A
Peak Melting Temperature	500	--	°F	ASTM D3418
Melting Temperature (DSC)	500	--	°F	ISO 3146
CLTE - Flow	1.8E-5	--	in/in/°F	
CLTE - Transverse	4.2E-5	--	in/in/°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0591 in)	1.0E+15	1.0E+12	ohms·cm	ASTM D257
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.50	5.50		IEC 60250
Dissipation Factor (1 MHz)	0.014	0.16		IEC 60250
Comparative Tracking Index	550	550	V	IEC 60112

Processing Information

Injection	Dry	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.