

Ultramid® A3HG2

Polyamide 66

BASF Corporation

Message:

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 Information				
Filler / Reinforcement		Glass Fiber, 10% Filler by Weight		
Features		Good 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		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.20	--	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	80.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.18 mm)	0.80	--	%	
Water Absorption				
Saturation	7.0	--	%	ASTM D570
Saturation, 23°C	7.0	--	%	ISO 62
Equilibrium, 50% RH	2.1	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	4600	2600	MPa	ISO 527-2
Tensile Strength				
Break, 23°C	100	--	MPa	ASTM D638
Break, 23°C	100	60.0	MPa	ISO 527-2
Tensile Elongation				
Break, 23°C	3.0	--	%	ASTM D638
Break, 23°C	3.0	12	%	ISO 527-2
Flexural Modulus (23°C)	4480	--	MPa	ASTM D790, ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	9.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	30	92	kJ/m ²	ISO 179
Notched Izod Impact				
23°C	53	--	J/m	ASTM D256
23°C	5.5	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	210	--	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	260	--	°C	ASTM D3418, ISO 3146
CLTE				
Flow	3.3E-5	--	cm/cm/°C	
Transverse	7.5E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity				
1.50 mm	1.0E+13	1.0E+10	ohms·cm	ASTM D257
--	1.0E+13	1.0E+10	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
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 to 4.0		hr	
Suggested Max Moisture	0.15		%	
Processing (Melt) Temp	280 to 305		°C	
Mold Temperature	80.0 to 90.0		°C	
Injection Pressure	3.50 to 12.5		MPa	
Injection Rate	Fast			

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