

Ultramid® A3WGM53 BK20560

Polyamide 66

BASF Corporation

Message:

Ultramid A3WGM53 BK20560 is a 40% glass/mineral reinforced, pigmented black, injection molding grade for high stiffness parts with good dimensional stability and surface finish.

Applications

Typical applications include automotive cylinder-head cover.

General Information				
Filler / Reinforcement		Glass\Mineral,40% Filler by Weight		
Features		Good Dimensional Stability		
		Good Surface Finish		
		High Stiffness		
		Oil Resistant		
Uses		Automotive Under the Hood		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Appearance		Black		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.48	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	30.0	--	cm ³ /10min	ISO 1133
Water Absorption				ISO 62
Saturation, 23°C	5.1	--	%	
Equilibrium, 23°C, 50% RH	1.4	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	230	90.0	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	12100	6100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	160	80.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.3	6.0	%	ISO 527-2
Flexural Modulus (23°C)	10100	5500	MPa	ISO 178
Flexural Stress (23°C)	225	125	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	6.7	--	kJ/m ²	

23°C	8.0	16	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	50	--	kJ/m ²	
23°C	55	62	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	7.5	--	kJ/m ²	
23°C	9.5	16	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	250	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	225	--	°C	ISO 75-2/A
Melting Temperature (DSC)	260	--	°C	ISO 3146
CLTE - Flow	1.5E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+13	1.0E+10	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	4.00	--		IEC 60250
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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