Ultramid® A3HG6 HR BK23591

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3HG6 HR BK23591 is a 30% glass reinforced, pigmented black, injection molding PA66 grade. It offers good resistance to hydrolysis.

Applications
Typical applications include automotive radiator mounting frame.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Hydrolysis Resistant	• Oil Resistant	
Uses	• Automotive Applications	• Automotive Under the Hood	
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD WSK-M4D752-A • FORD WSS-M4D752-B1 • GM GMW16270P-PA66-GF30 • GM GMW16270P-PA66-GF30 Color: Black • GM GMW3038P-PA66-GF30HW • GM QK 003013 HW • IMDS ID 1317090 • PSA Peugeot-Citroën SPA X62 4117 Color: 23591 Black		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR)				ISO 1133
275°C/5.0 kg	25	--	cm³/10min	
Water Absorption				ISO 62
Saturation, 73°F	5.5	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.7	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.45E+6	986000	psi	ISO 527-2
Tensile Stress				ISO 527-2
Break, -40°F	34800	33500	psi	
Break, 73°F	27600	17400	psi	
Tensile Strain				ISO 527-2
Break, -40°F	3.1	3.0	%	
Break, 73°F	3.2	5.4	%	
Flexural Modulus (73°F)	1.26E+6	841000	psi	ISO 178
Flexural Stress (73°F)	39900	29000	psi	ISO 178

Ultramid® A3HG6 HR BK23591
BASF Corporation - Polyamide 66

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	4.3	--	ft·lb/in²	
73°F	5.2	7.6	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	31	--	ft·lb/in²	
73°F	38	43	ft·lb/in²	
Notched Izod Impact Strength				ISO 180
-22°F	4.3	--	ft·lb/in²	
73°F	6.2	9.5	ft·lb/in²	
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	32600	25400	psi	ISO 2039-1
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	482	--	°F	
Melting Temperature (DSC)	500	--	°F	ISO 3146
CLTE - Flow	1.4E-5	--	in/in/°F	
CLTE - Transverse	3.6E-5	--	in/in/°F	
RTI Elec (0.06 in)	149	--	°F	UL 746
RTI Imp (0.06 in)	149	--	°F	UL 746
RTI Str (0.06 in)	149	--	°F	UL 746
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.50	5.60		IEC 60250
Dissipation Factor (100 Hz)	0.014	0.23		IEC 60250
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating (0.06 in)	HB	--		UL 94

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.