

Ultramid® A3EG10 FC Aqua

Polyamide 66

BASF Corporation

Message:

Ultramid® A3EG10 FC Aqua black is optimized for plastic parts, mandatory requiring material approvals for drinking water or direct food contact.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight		
Features		Compliance of Food Exposure		
Uses		Non-specific food applications		
		Potable water application		
Agency Ratings		ACS not rated		
		DVGW W270		
		EC 1907/2006 (REACH)		
		EC 2023/2006		
		FDA 21 CFR 177.1500		
		FDA 21 CFR 178.3297		
		KTW not rated		
		NSF Not Rated		
		WRAS not rated		
		Europe 10/1/2011 12:00:00 AM		
RoHS Compliance		RoHS compliance		
Appearance		Black		
Forms		Particle		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.56	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	8.00	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.82	--	%	ISO 294-4
Flow direction	0.33	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	3.7 - 4.3	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.0 - 1.4	--	%	ISO 62
Viscosity Number (96% H2SO4)	130	--	cm ³ /g	ISO 307

Mold Shrinkage - constrained ¹	0.45	--	%	
Temperature index-at 50% loss of tensile strength				IEC 60216
-- ²	135	--	°C	IEC 60216
-- ³	165	--	°C	IEC 60216
Maximum operating temperature-short cycle operation	240	--	°C	
Automotive Materials (> 1.00 mm)	Passed	--		FMVSS 302
Polymer Abbreviation	PA66-GF50	--		
Screw Speed			mm/sec	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	16800	12500	MPa	ISO 527-2
Tensile Stress (Break)	240	180	MPa	ISO 527-2
Tensile Strain (Break)	2.5	3.5	%	ISO 527-2
Tensile Creep Modulus ⁴ (1000 hr)	--	7800	MPa	ISO 899-1
Flexural Modulus	15000	13500	MPa	ISO 178
Flexural Stress	360	300	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	13	--	kJ/m ²	ISO 179/1eA
23°C	18	25	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	--	kJ/m ²	ISO 179/1eU
23°C	95	100	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	13	15	kJ/m ²	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	250	--	°C	ISO 75-2/B
1.8 MPa, not annealed	250	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 80°C	5.0E-6 - 2.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	5.0E-5 - 6.0E-5	--	cm/cm/°C	ISO 11359-2
Specific Heat	1300	--	J/kg/°C	
Thermal Conductivity	0.37	--	W/m/K	DIN 52612
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+10	ohms	IEC 60093

Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	3.80	6.60		IEC 60250
Dissipation Factor (1 MHz)	0.015	0.17		IEC 60250
Comparative Tracking Index (Solution A)	550	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.60 mm)	HB	--		UL 94
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Moisture	0.15		%	
Hopper Temperature	80.0		°C	
Rear Temperature	300		°C	
Middle Temperature	300		°C	
Front Temperature	300		°C	
Nozzle Temperature	300		°C	
Processing (Melt) Temp	280 - 310		°C	
Mold Temperature	80.0 - 90.0		°C	
Injection instructions				
Residence Time : <10 min				
NOTE				

- | | |
|----|--|
| 1. | Test box with central gating, dimensions of base (107*47*1,5) mm, processing conditions: TM = 290°C, TW = 80°C |
| 2. | 20000 h |
| 3. | 5000 h |
| 4. | strain <= 0.5%, 23°C |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT