

Ultramid® A3U40G5

Polyamide 66

BASF Corporation

Message:

Without halogenes flame retarded glass fiber reinforced injection moulding grade; light colorable; outstanding mechanical and electrical properties. In particular optimized for the glow wire requirements of IEC 60335.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 25% filler by weight		
Additive		Flame retardancy		
Features		Good electrical performance		
		Oil resistance		
		Halogen-free		
		Flame retardancy		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Forms		Particle		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.42	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	30.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	1.1	--	%	ISO 294-4
Flow direction	0.40	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	4.7 - 5.1	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.4 - 1.6	--	%	ISO 62
Viscosity Number (96% H ₂ SO ₄)	140	--	cm ³ /g	ISO 307
Mold shrinkage-model-housing (1.50 mm)	0.40 - 0.60	--	%	
Smoke Toxicity - CIT NLP acc. to CEN/TS 45545-2	0.410	--		NF X70-100
Smoke density-Ds max. (20 min), 25kW/m ² , 2mm	100	--		ISO 5659-2
Polymer Abbreviation	PA66-GF25 FR	--		
Screw Speed			mm/sec	
Mechanical	Dry	Conditioned	Unit	Test Method

Tensile Modulus	10000	7400	MPa	ISO 527-2
Tensile Stress (Break)	140	100	MPa	ISO 527-2
Tensile Strain (Break)	2.8	3.8	%	ISO 527-2
Flexural Modulus	9800	7500	MPa	ISO 178
Flexural Stress	220	170	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	6.0	6.0	kJ/m ²	ISO 179/1eA
23°C	7.0	7.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	45	45	kJ/m ²	ISO 179/1eU
23°C	60	60	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	260	--	°C	ISO 75-2/B
1.8 MPa, not annealed	245	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	3.80	4.60		IEC 60250
Dissipation Factor (1 MHz)	0.017	0.10		IEC 60250
Comparative Tracking Index (Solution A)	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.400 mm	V-0	--		UL 94
0.800 mm	V-0	--		UL 94
1.60 mm	5VA	--		UL 94
Glow Wire Flammability Index (> 0.750 mm)	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (> 0.750 mm)	775	--	°C	IEC 60695-2-13
Oxygen Index	35	--	%	ISO 4589-2
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	290		°C	

Middle Temperature	290	°C
Front Temperature	290	°C
Nozzle Temperature	290	°C
Processing (Melt) Temp	280 - 300	°C
Mold Temperature	80.0 - 90.0	°C

Injection instructions

Residence Time : <10 min

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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

