

Ultramid® B3UG4

Polyamide 6

BASF Corporation

Message:

Ultramid B3UG4 is a 20% glass reinforced, halogen free flame retardant injection molding PA6 grade with enhanced flammability protection and low smoke density. Resistant to glow wire test GWFI to 960 degrees Celsius

General Information				
UL YellowCard		E36632-100614963	E41871-100110474	E41871-233718
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Additive		Flame Retardant		
Features		Flame Retardant		
		Halogen Free		
		Low Smoke Emission		
		Oil Resistant		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Forms		Pellets		
Processing Method		Injection Molding		
Multi-Point Data		Creep Modulus vs. Time (ISO 11403-1)		
		Isochronous Stress vs. Strain (ISO 11403-1)		
		Isothermal Stress vs. Strain (ISO 11403-1)		
		Secant Modulus vs. Strain (ISO 11403-1)		
		Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.31	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	80.0	--	cm ³ /10min	ISO 1133
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6000	3000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	95.0	50.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	6.0	%	ISO 527-2
Flexural Modulus (23°C)	5700	2800	MPa	ISO 178
Flexural Stress (23°C)	150	70.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	3.4	--	kJ/m ²	
23°C	3.0	9.0	kJ/m ²	

Charpy Unnotched Impact Strength				ISO 179
-30°C	35	--	kJ/m ²	
23°C	40	110	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	170	--	°C	ISO 75-2/A
Melting Temperature (DSC)	220	--	°C	ISO 3146
RTI Elec				UL 746
0.710 mm	65.0	--	°C	
1.50 mm	140	--	°C	
3.00 mm	140	--	°C	
RTI Imp				UL 746
0.710 mm	65.0	--	°C	
1.50 mm	125	--	°C	
3.00 mm	125	--	°C	
RTI Str				UL 746
0.710 mm	65.0	--	°C	
1.50 mm	140	--	°C	
3.00 mm	140	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.80	--		IEC 60250
Dissipation Factor (1 MHz)	0.015	--		IEC 60250
Comparative Tracking Index	550	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.710 mm	V-2	--		
1.50 mm	V-2	--		
3.00 mm	V-2	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 to 4.0		hr	
Suggested Max Moisture	0.15		%	
Processing (Melt) Temp	250 to 275		°C	
Mold Temperature	80.0 to 90.0		°C	
Injection Pressure	3.50 to 12.5		MPa	
Injection Rate	Fast			

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