

Ultramid® B3ZG6

Polyamide 6

BASF Corporation

Message:

Ultramid B3ZG6 is an impact-modified, 30% glass fiber reinforced injection molding PA6 grade for industrial items having very high impact strength and rigidity.

Applications

Typical applications include automotive airbag housings and half-shells for suitcases.

General Information				
UL YellowCard		E36632-531665	E41871-233707	
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Additive		Impact Modifier		
Features		High Rigidity		
		Impact Modified		
		Oil Resistant		
		Ultra High Impact Resistance		
Uses		Automotive Applications		
		Housings		
		Industrial Applications		
		Luggage		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.33	--	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	25.0	--	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.18 mm)	0.30	--	%	
Water Absorption				
Saturation	6.2	--	%	ASTM D570
Saturation, 23°C	6.2	--	%	ISO 62
Equilibrium, 50% RH	2.0	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9000	5300	MPa	ISO 527-2
Tensile Strength				

Break, 23°C	138	--	MPa	ASTM D638
Break, 23°C	150	100	MPa	ISO 527-2
Tensile Elongation				
Break, 23°C	3.6	--	%	ASTM D638
Break, 23°C	3.6	10	%	ISO 527-2
Flexural Modulus				
23°C	7860	--	MPa	ASTM D790
23°C	7400	4700	MPa	ISO 178
Flexural Stress (23°C)	220	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	15	--	kJ/m ²	
23°C	20	35	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	90	--	kJ/m ²	
23°C	95	110	kJ/m ²	
Notched Izod Impact				
-40°C	140	--	J/m	ASTM D256
23°C	190	--	J/m	ASTM D256
-30°C	10	--	kJ/m ²	ISO 180
23°C	20	32	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	220	--	°C	ASTM D648, ISO 75-2/B
1.8 MPa, Unannealed	207	--	°C	ASTM D648
1.8 MPa, Unannealed	200	--	°C	ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE				
Flow	1.0E-5	--	cm/cm/°C	ASTM E831
Flow	2.3E-5	--	cm/cm/°C	
Transverse	6.5E-5	--	cm/cm/°C	
RTI Elec				UL 746
0.730 mm	150	--	°C	
1.50 mm	150	--	°C	
3.00 mm	150	--	°C	
RTI Imp				UL 746
0.730 mm	115	--	°C	
1.50 mm	115	--	°C	
3.00 mm	120	--	°C	
RTI Str				UL 746

0.730 mm	150	--	°C	
1.50 mm	150	--	°C	
3.00 mm	150	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity				
1.50 mm	1.0E+13	1.0E+10	ohms·cm	ASTM D257
--	1.0E+13	1.0E+10	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.80	6.80		IEC 60250
Dissipation Factor (1 MHz)	0.020	0.20		IEC 60250
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.730 mm	HB	--		
1.50 mm	HB	--		
3.00 mm	HB	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 to 4.0		hr	
Suggested Max Moisture	0.080		%	
Rear Temperature	245 to 275		°C	
Middle Temperature	260 to 285		°C	
Front Temperature	270 to 295		°C	
Nozzle Temperature	270 to 295		°C	
Processing (Melt) Temp	270 to 295		°C	
Mold Temperature	80.0 to 95.0		°C	
Injection Pressure	3.50 to 12.5		MPa	
Injection Rate	Fast			

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