

Ultramid® B3EG6

Polyamide 6

BASF Corporation

Message:

Ultramid B3EG6 is a 30% glass fiber reinforced injection molding PA6 grade.

Applications

Typical applications include industrial articles and electrical insulating parts.

General Information				
UL YellowCard		E36632-531648	E41871-233687	
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Features		Oil Resistant		
Uses		Electronic Insulation		
		Industrial Applications		
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)		
		Shear Modulus vs. Temperature (ISO 11403-1)		
		Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.36	--	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	50.0	--	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.18 mm)	0.30	--	%	
Water Absorption				
Saturation	6.6	--	%	ASTM D570
Saturation, 23°C	6.6	--	%	ISO 62
Equilibrium, 50% RH	2.1	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9500	6200	MPa	ISO 527-2
Tensile Strength				
Break, 23°C	172	--	MPa	ASTM D638

Break, 23°C	185	115	MPa	ISO 527-2
Tensile Elongation				
Break, 23°C	3.2	--	%	ASTM D638
Break, 23°C	3.5	8.0	%	ISO 527-2
Flexural Modulus				
23°C	8280	--	MPa	ASTM D790
23°C	8600	5000	MPa	ISO 178
Flexural Stress (23°C)	270	180	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	11	--	kJ/m ²	
23°C	15	30	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	80	--	kJ/m ²	
23°C	95	110	kJ/m ²	
Notched Izod Impact				
-40°C	96	--	J/m	ASTM D256
23°C	110	--	J/m	ASTM D256
23°C	15	20	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	210	--	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE				
Flow	2.0E-5	--	cm/cm/°C	ASTM E831
Flow	2.3E-5	--	cm/cm/°C	
Transverse	6.5E-5	--	cm/cm/°C	
RTI Elec				UL 746
0.750 mm	120	--	°C	
1.50 mm	120	--	°C	
3.00 mm	120	--	°C	
RTI Imp				UL 746
1.50 mm	95.0	--	°C	
3.00 mm	95.0	--	°C	
RTI Str				UL 746
1.50 mm	130	--	°C	
3.00 mm	130	--	°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				IEC 60250
100 Hz	0.023	0.22		
1 MHz	0.023	0.22		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.50 mm	HB	--		
3.00 mm	HB	--		
Injection	Dry	Unit		
Drying Temperature	83.0		°C	
Drying Time	2.0 to 4.0		hr	
Suggested Max Moisture	0.15		%	
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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