

Product Description

Ultramid B3EG3 is a 15% glass fiber reinforced injection molding PA6 grade for housings with enhanced impact resistance.

Applications

Typical applications include automotive mirror housings and wheels of mountain bikes.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.23	
Moisture, %	62		
(50% RH)		2.3	
(Saturation)		7.7	
RHEOLOGICAL	ISO Test Method	Dry	Conditioned
Melt Volume Rate (275 °C/5 Kg), cc/10min.	1133	75	-
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		5,800	3,500
Tensile stress at break, MPa	527		
23°C		130	70
Tensile strain at break, %	527		
23°C		3.5	15
Flexural Modulus, MPa	178		
23°C		5,200	2,500
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
23°C		6	-
Charpy Notched, kJ/m ²	179		
-30°C		7	-
23°C		8	20
Charpy Unnotched, kJ/m ²	179		
-30°C		45	-
23°C		50	105
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, °C	75	190	-
HDT B, °C	75	215	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		0.33 X10 ⁻⁴	-
Coef. of Linear Thermal Expansion, Normal, mm/mm °C		0.75 X10 ⁻⁴	-
ELECTRICAL	ISO Test Method	Dry	Conditioned
Volume Resistivity (Ohm)	IEC 60093	1E13	1E10
Dielectric Constant (1 MHz)	IEC 60250	3.8	7
Dissipation Factor (100 Hz)	IEC 60250	250	2,400
Dissipation Factor (1 MHz)	IEC 60250	250	2,400
UL RATINGS	UL Test Method	Property Value	
Relative Temperature Index, 0.83mm	UL746B		
Electrical, °C		120	
Flammability Rating, 1.5mm	UL94	HB	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, °C		130	
Mechanical w/ Impact, °C		95	
Electrical, °C		120	
Flammability Rating, 3.0mm	UL94	HB	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		130	
Mechanical w/ Impact, °C		95	
Electrical, °C		120	

Processing Guidelines

Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80°C (176°F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 250-290°C (482-554°F)

Mold Temperature 80-95°C (176-203°F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 80-95°C (176-203°F) is recommended.

Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage. recommended to minimize glass fiber breakage.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

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