

Ultramid® B3EG3 Polyamide 6



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	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.23	
Mold Shrinkage (1/8" bar, in/in)		0.005	
Moisture, %	D-570		
(50% RH)		2.3	
(Saturation)		7.7	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Break, MPa (psi)	D-638		
23C (73F)		103 (14,900)	-
Elongation, Break, %	D-638		
23C (73F)		3.5	-
Flexural Modulus, MPa (psi)	D-790		
23C (73F)		5,170 (750,000)	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40C (-40F)		48 (0.9)	-
23C (73F)		59 (1.1)	-
THERMAL	ASTM Test Method	Dry	Conditioned
Melting Point, C(F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) C(F)	D-648	190 (374)	-
Heat Deflection @ 66 psi (.45 MPa) C(F)	D-648	215 (419)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.2 X10-4	-
UL RATINGS	UL Test Method	Property Value	
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	
ELECTRICAL	ASTM Test Method	Dry	Conditioned
Volume Resistivity, 1.5 mm	D-257	1E13	1E10

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 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 250-290 degC (482-554 degF)
Mold Temperature 80-95 degC (176-203 degF)
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 degC (176-203 degF) 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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