Product Information

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Ultramid® B3EG6

Polyamide 6

Product Description

Ultramid B3EG6 is a 30% glass fiber reinforced injection molding PA6 grade. It conforms to FDA requirements of 21 CFR 177.1500.

Applications

Typical applications include industrial articles and electrical insulating parts.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.36
Moisture, %	62	
(50% RH)		2.1
(Saturation)		6.6

RHEOLOGICAL	ISO Test Method	Dry	Conditioned
Melt Volume Rate (275 °C/5 Kg), cc/10min.	1133	50	-

MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		9,500	6,200
Tensile stress at break, MPa	527		
23°C		185	115
Tensile strain at break, %	527		
23°C		3.5	8
Flexural Strength, MPa	178		
23°C		270	180
Flexural Modulus, MPa	178		
23°C		8,600	5,000

IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m²	180		
23°C		15	20
Charpy Notched, kJ/m²	179		
23°C		15	30
-30°C		11	-
Charpy Unnotched, kJ/m²	179		
23°C		95	110
-30°C		80	-

THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, ° C	75	210	-
HDT B, ° C	75	220	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		0.23 X10-4	-
Coef. of Linear Thermal Expansion, Normal, mm/mm °C		0.65 X10-4	-

ELECTRICAL	ISO Test Method	Property Value	
Volume Resistivity	IEC 60093	1E13	-
Dielectric Constant (1 MHz)	IEC 60250	3.8	-
Dissipation Factor (100 Hz)	IEC 60250	230	-
Dissipation Factor (1 MHz)	IEC 60250	230	-

UL RATINGS	ISO Test Method	Dry	Conditioned
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	-

Processing Guidelines

Material Handling
Max. Water content: 0.10%
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, 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 270-295 °C (518-563 °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.

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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