Product Information

Aug 2020

Ultramid® B3ZG6
Polyamide 6

BASF
We create chemistry

Product Description

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.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.33	
Moisture, %	62		
(50% RH)		2	
(Saturation)		6.2	
RHEOLOGICAL	**ISO Test Method**	**Dry**	**Conditioned**
Melt Volume Rate (275 C/5 Kg), cc/10min.	1133	25	-
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		9,000	5,300
Tensile stress at break, MPa	527		
23C		150	100
Tensile strain at break, %	527		
23C		3.6	10
Flexural Strength, MPa	178		
23C		220	-
Flexural Modulus, MPa	178		
23C		7,400	4,700
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m²	180		
-30C		10	-
23C		20	32
Charpy Notched, kJ/m²	179		
-30C		15	-
23C		20	35
Charpy Unnotched, kJ/m²	179		
-30C		90	-
23C		95	110
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	200	-
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	-

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

China
Purchase information:+86 185 5121 3137

ELECTRICAL	ISO Test Method	Dry	Conditioned
Volume Resistivity (Ohm-m)	IEC 60093	1E13	1E10
Dielectric Constant (1 MHz)	IEC 60250	3.8	6.8
Dissipation Factor (1 MHz), E-4	IEC 60250	200	2,000

UL RATINGS	UL Test Method	Property Value
Flammability Rating, 0.73mm	UL94	HB
Relative Temperature Index, 0.73mm	UL746B	
Mechanical w/o Impact, C		150
Mechanical w/ Impact, C		115
Electrical, C		150
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		150
Mechanical w/ Impact, C		115
Electrical, C		150
Flammability Rating, 3.0mm	UL94	HB
Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, C		150
Mechanical w/ Impact, C		120
Electrical, C		150

Processing Guidelines

Material Handling
Max. Water content: 0.08%
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 80C (176F) 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 270-295C (518-563F)
Mold Temperature 80-95C (176-203F)
Injection and Packing Pressure 35-125 bar (500-1800psi)
Rear Zone 245-275C (473-527F)
Center Zone 260-285C (500-545C)
Front Zone 270-295C (518-563F)
Nozzle 270-295C (518-563F)

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 80-95C (176-203F) is required.

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.

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

China
Purchase information:+86 185 5121 3137

Note

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

China
Purchase information:+86 185 5121 3137