Product Information

Aug 2013

Ultramid® Structure B3WG10 LF BK564

Polyamide 6

Product Description

Ultramid Structure B3WG10 LF BK564 is a long glass-fiber fiber reinforced and heat aging resistant injection molding grade designed for applications requiring excellent strength and stiffness.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.56	
Mold Shrinkage, parallel, %	294-4	0.26	
Mold Shrinkage, normal, %	294-4	0.54	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		16,800	10,400
80C		9,400	-
Tensile stress at break, MPa	527		
23C		240	155
80C		143	-
Tensile strain at break, %	527		
23C		2	2.1
Flexural Strength, MPa	178		
23C		360	-
Flexural Modulus, MPa	178		
23C		15,400	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		31	45
Charpy Notched, kJ/m^2	179		
23C		32	32
-30C		33	33
Charpy Unnotched, kJ/m^2	179		
23C		88	86
-30C		78	72
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	218	-

Processing Guidelines

Material Handling

Max. Water content: 0.12%

Ultramid is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 83 degC (180 degF). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.03% - 0.08%. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile

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Melt Temperature 280-300 degC (536-572 degF)
Mold Temperature 80-100 degC (176-212 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
A mold temperature of 80-100 degC (176-212 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.

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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