Product Information

Ultramid® Structure A3WG10 LF BK564

Polyamide 66

BASF The Chemical Company

Product Description

Ultramid Structure A3WG10 LF BK564 is a long glass-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	0.38	
Mold Shrinkage, normal, %	294-4	0.74	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		16,500	12,300
80C		11,000	-
Tensile stress at break, MPa	527		
23C		240	187
80C		170	-
Tensile strain at break, %	527		
23C		2	2.1
Flexural Strength, MPa	178		
23C		370	297
Flexural Modulus, MPa	178		
23C		15,400	12,000
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		35	35
Charpy Notched, kJ/m^2	179		
23C		37	37
-30C		37	37
Charpy Unnotched, kJ/m^2	179		
23C		80	85
-30C		70	65
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	260	-
HDT A, C	75	260	-

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 (181 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

Melt Temperature 290-310 degC (554-590 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.