Product Information

Oct 2016

Ultramid® A3ZG3 HP BK20465

Polyamide 66

BASF We create chemistry

Email PDF Datasheet | Print/Save Version

Product Description

Ultramid A3ZG3 HP BK20465 is a 15% glass fiber reinforced, heat stabilized, impact modified, injection molding PA66 grade.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.19	
Mold Shrinkage, parallel, %	294-4	0.72	
Mold Shrinkage, normal, %	294-4	1.20	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23°C		5,130	3,550
Tensile stress at break, MPa	527		
23°C		105	69
Tensile strain at break, %	527		
23°C		3.9	11
Flexural Strength, MPa	178		
23°C		165	111
Flexural Modulus, MPa	178		
23°C		4,590	3,150
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
-40°C		5.8	5.8
23°C		14	19
Charpy Notched, kJ/m^2	179		
-30°C		5.6	5.6
23°C		14	18
Charpy Unnotched, kJ/m^2	179		
-30°C		72	79
23°C		71	80
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, °C	3146	260	-
HDT A, ° C	75	240	-
HDT B, ° C	75	258	-

Processing Guidelines

Material Handling

Nylon 66 materials must be properly dried in order to provide parts with optimum strength and toughness. Nylon 66 materials are hygroscopic and will become degraded by excessive moisture during the injection molding process. For unopened bag/box, dry at 60°C (140°F) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66°C (150°F) or until the moisture level is between 0.04 - 0.20%.

Typical Profile

Melt Temperature: 288-305°C (550-581°F)
Mold Temperature: 60-100°C (140-212°F)
Injection Pressure: 35-125 MPa (5000-18000 psi)

Back Pressure: 0-0.35 MPa (0-50 psi)
Screw RPM 40-80
Screw Compression Ratio:3:1-4:1

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 60-100°C (140-212°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.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

Note

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: http://www.plasticsportal.com/usa

BASF
We create chemistry