Ultramid® A3WG8 BK20560

Polyamide 66

Ultramid A3WG8 BK20560 is a 40% glass fiber reinforced, pigmented black PA66. This grade offers excellent heat resistance and high strength. It is designed for industrial applications requiring excellent strength and stiffness.

Applications

Typical applications include gear wheels, solenoid valve housings, cable attachments, automotive fuel distributors, pedals and components for automotive gear shifts.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.46	
Moisture, %	62		
(50% RH)		1.5	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23°C		13,200	-
Tensile stress at break, MPa	527		
23°C		220	-
Tensile strain at break, %	527		
23°C		3.0	-
Flexural Modulus, MPa	178		
23°C		12,000	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m²	180		
-40°C		12	-
23°C		14	-

Charpy Notched, kJ/m²	179		
-30°C		11	-
23°C		13	-
Charpy Unnotched, kJ/m²	179		
-30°C		83	-
23°C		95	-

THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	260	-
HDT A, ° C	75	250	-
HDT B, ° C	75	260	-

Processing Guidelines

Material Handling
Max. Water content: 0.15%
Material 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 180F (83C). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile
Melt Temperature 280-305°C (536-581°F)
Mold Temperature 80-90°C (176-194°F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
A mold temperature of 80-90°C (176-194°F) is recommended, however temperatures of as low as 45°C (113°F) and as high as 105°C (221°F) can be used where applicable.

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

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

General Information

800-BC-RESIN

Technical Assistance

800-527-TECH (734-324-5150)

Web address

http://www.plasticsportal.com/usa