Ultramid® A3WG6 BK00564

Polyamide 66

Ultramid A3WG6 BK00564 is a 30% glass fiber reinforced, pigmented black and heat resistance injection molding PA66 grade for machinery components and housings of high stiffness and dimensional stability. A3EG6 is the preferred grade for producing electrically insulating parts.

Applications

Typical applications include lamp socket housings, cooling fans, insulating profiles for aluminum window frames, water containers for automotive cooling systems.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.36	
Moisture, %	62		
(50% RH)		1.7	
(Saturation)		5.5	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23 °C		9,900	-
Tensile stress at break, MPa	527		
23 °C		190	-
Tensile strain at break, %	527		
23 °C		2.9	-
Flexural Modulus, MPa	178		
23 °C		8,800	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m²	180		
23 °C		9.9	-

Charpy Notched, kJ/m²	179		
-40°C		8.6	-
23°C		9.8	-
Charpy Unnotched, kJ/m²	179		
-30°C		57	-
23°C		68	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, °C	3146	260	-
HDT A, ° C	75	253	-
UL RATINGS	**UL Test Method**	**Property Value**	
Flammability Rating, 0.71mm	UL94	HB	
Relative Temperature Index, 0.71mm	UL746B		
Electrical, °C		125	
Flammability Rating, 1.5mm	UL94	HB	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, °C		115	
Mechanical w/ Impact, °C		115	
Electrical, °C		125	
Flammability Rating, 3.0mm	UL94	HB	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		130	
Mechanical w/ Impact, °C		120	
Electrical, °C		125	

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

BASF Corporation

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General Information
800-BC-RESIN

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

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