

Ultramid® B3W BK102

Polyamide 6



Product Description

Ultramid B3W BK102 is an unreinforced, heat stabilized, pigmented black, low viscosity, general purpose injection molding PA6 exhibiting excellent fluidity for filling thin sections. It possesses the combination of strength, stiffness and toughness properties as well as excellent chemical, thermal and abrasion resistance. The heat stabilizer system extends its retention of properties at elevated temperatures.

Applications

Ultramid B3W BK102 is generally recommended for applications such as drapery hardware, gears, fittings, furniture casters, bearings, handles, clips and fasteners.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.13	
Moisture, %	62		
(24 Hour)		1.6	
(50% RH)		2.7	
(Saturation)		9.5	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		3,100	970
Tensile stress at yield, MPa	527		
23C		85	36
Tensile strain at yield, %	527		
23C		4	16
Nominal strain at break, %	527		
23C		25	>50
Flexural Strength, MPa	178		
23C		90	25
Flexural Modulus, MPa	178		
23C		2,650	770
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
-40C		4	-
23C		5.5	-
Charpy Notched, kJ/m ²	179		
23C		3	-
Charpy Unnotched, kJ/m ²	179		
23C		N	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	220	-
HDT A, C	75	60	-

Processing Guidelines

Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80C (176F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature: 240-285C (464-545F)

Mold Temperature: 65-80C (149-176F)

Injection and Packing Pressure: 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 65-80C (149-176F) is recommended, however temperatures of as low as 10C (50F) 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.

Fill Rate

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

Note

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