

Ultramid® B3ZG7 SC

Polyamide 6



Product Description

Ultramid B3ZG7 SC is an uncolored, 35% glass reinforced, heat stabilized, impact modified PA6 injection molding grade.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.37	
Moisture, %	62		
(50% RH)		1.8	
(Saturation)		6.0	
RHEOLOGICAL	ISO Test Method	Dry	Conditioned
Melt Flow Rate (235 C/5 Kg), g/10min.	1133	2.3	-
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		10,200	-
Tensile stress at break, MPa	527		
23C		169	-
Tensile strain at break, %	527		
23C		4.1	-
Flexural Modulus, MPa	178		
23C		9,300	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
-40C		18	-
23C		24	-
Charpy Notched, kJ/m ²	179		
-40C		17	-
-30C		17	-
23C		22	-
Charpy Unnotched, kJ/m ²	179		
-30C		113	-
23C		102	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	219	-
HDT A, C	75	206	-
HDT B, C	75	219	-

Processing Guidelines

Material Handling

Max. Water content: 0.08%

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 270-295C (518-563F)
Mold Temperature 80-95C (176-203F)
Injection and Packing Pressure 35-125 bar (500-1800psi)
Rear Zone 245-275C (473-527F)
Center Zone 260-285C (500-545C)
Front Zone 270-295C (518-563F)
Nozzle 270-295C (518-563F)

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 80-95C (176-203F) is required.

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

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