

Ultramid® B3ZG7 OSI BK23273 Polyamide 6

Ultramid B3ZG7 OSI BK23273 is a 35% glass reinforced, pigmented black, heat stabilized, impact modified PA6 injection molding grade. It was developed to meet demanding mechanical and chemical requirements for the automotive oil pan application.

Applications

Typical application is automotive oil pan.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.38	
Mold Shrinkage, parallel, %	294-4	0.2	
Mold Shrinkage, normal, %	294-4	0.6	
Moisture, %	62		
(50% RH)		1.70	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23 °C		10,000	6,170
Tensile stress at break, MPa	527		
23 °C		163	112
Tensile strain at break, %	527		
23 °C		4.1	11
Flexural Modulus, MPa	178		
23 °C		8,920	5,650
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		

-40°C		17	-
23°C		24	34
Charpy Notched, kJ/m²	179		
-30°C		18	-
23°C		23	34
Charpy Unnotched, kJ/m²	179		
-30°C		113	-
23°C		100	106
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, ° C	75	203	-
HDT B, ° C	75	220	-

Processing Guidelines

Material Handling

Max. Water content: 0.08%

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 270-295°C (518-563°F)

Mold Temperature 80-95°C (176-203°F)

Injection and Packing Pressure 35-125 bar (500-1800psi)

Rear Zone 245-275°C (473-527°F)

Center Zone 260-285°C (500-545°C)

Front Zone 270-295°C (518-563°F)

Nozzle 270-295°C (518-563°F)

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 80-95°C (176-203°F) 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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