Product Information

Ultramid® TG7S BK-102
Polyamide 6

BASF
The Chemical Company

Product Description

Ultramid TG7S Bk-102 is a 34% glass reinforced, pigmented black, heat stabilized, impact modified PA6 injection molding grade. It was developed to meet the demanding requirements of the first North American seat cushion pan/frame to bemade of an engineering plastic as opposed to metal. TG7S BK-102 exhibits improved strength,stiffness and notched impact properties over Ultramid 8333G HI.

Applications

Include cushion seat pan/frame and other automotive seating applications, automotive fan, power tools and trimmer components.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.38	
RHEOLOGICAL	**ISO Test Method**	**Dry**	**Conditioned**
Melt Volume Rate (235 C/5 Kg), cc/10min.	1133	6	-
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		9,500	-
Tensile stress at break, MPa	527		
23C		165	-
Tensile strain at break, %	527		
23C		2.5	-
Flexural Modulus, MPa	178		
23C		8,400	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		22	-
-40C		16.6	-
Charpy Notched, kJ/m^2	179		
23C		22	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	208	-
HDT B, C	75	220	-

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

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 degC (176-203 degF) 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