

Ultramid® 8272GHS BK102 Polyamide 6

Ultramid 8272GHS BK102 is a 12% glass fiber reinforced, black pigmented, thermally modified, PA6 blow molding compound offering an excellent balance of engineering properties combined with the melt strength ideally suited for blow molding and other applications requiring ultra high melt viscosity. It exhibits improved strength, stiffness and creep resistance compare to standard blow molding grades. Outstanding permeability and chemical resistance to oils, hydrocarbons and most solvents are other advantages along with excellent stiffness ad the ability to fabricate complex shapes for cost effective metal replacements.

Applications

Ultramid 8272GHS BK102 is designed for blow molding applications requiring improved short term thermal performance as well as extrusions. It is ideal for air ducts, reservoirs and covers.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.22	
Moisture, %	62		
(24 Hour)		1.4	
(50% RH)		2.3	
(Saturation)		8.3	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
-40°C		6,370	6,400
23°C		5,220	3,100
80°C		2,100	1,900
120°C		1,445	1,500
150°C		1,470	1,400
Tensile stress at break, MPa	527		
-40°C		115	110
23°C		110	60

120°C		45	25
150°C		40	25
Tensile strain at break, %	527		
-40°C		2.0	2.0
23°C		3.0	-
120°C		15	20
150°C		12.5	15
Flexural Modulus, MPa	178		
23°C		4,300	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m²	180		
23°C		5.9	-
Charpy Notched, kJ/m²	179		
23°C		7.1	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, ° C	75	170	-
HDT B, ° C	75	210	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		0.28 X10-4	-
Coef. of Linear Thermal Expansion, Normal, mm/mm °C		0.72 X10-4	-
ELECTRICAL	ISO Test Method	Dry	Conditioned
Volume Resistivity (Ohm-m)	IEC 60093	>1E13	>1E13

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 245-260°C (473-500°F)

Mold Temperature 60°C (140°F)

Blow Ratio 2:1

Mold Temperatures

Mold temperatures of 60°C (140°F) are generally recommended; however, surface temperatures of 10-95°C (50-203°F) can be used where applicable. The degree of crystallinity of thin polyamide wall sections, 0.6mm (.023") or less, may be controlled by the temperature of the mold. A cold mold, 5-30°C (41-86°F), will rapidly quench the section producing a clear, relatively flexible part, while a hot mold, over 40°C (104°F), will produce an opaque part with increased stiffness.

Blow Ratio

A diametrical blow ratio of 2:1 is generally recommended for plain symmetrical parts. As part complexity increases, lower blow ratios should be utilized to prevent thin wall cross sections, especially in corners.

Note

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