

Ultramid® 8234G HS

Polyamide 6



Product Description

Ultramid 8234G HS is a heat stabilized, 44% glass fiber reinforced PA6 injection molding compound offering the highest level of strength, stiffness, high temperature performance and dimensional stability. It is available in natural and black versions. Pigmented and weatherable versions may be offered on a case by case basis.

Applications

Ultramid 8234G HS is generally recommended for applications such as power tool housings, cattle ear taggers, luggage frames, fans and pressure regulator housings.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.49	
Moisture, %	62		
(24 Hour)		0.9	
(50% RH)		1.5	
(Saturation)		5.2	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		13,500	7,490
Tensile stress at break, MPa	527		
23C		215	145
Tensile strain at break, %	527		
23C		3	6
Flexural Strength, MPa	178		
23C		325	-
Flexural Modulus, MPa	178		
23C		11,400	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
23C		14	-
-40C		11	-
Charpy Notched, kJ/m ²	179		
23C		21	-
Charpy Unnotched, kJ/m ²	179		
23C		90	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	220	-
HDT A, C	75	210	-
HDT B, C	75	220	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.32 X10-4	-
Coef. of Linear Thermal Expansion, Normal, mm/mm C		0.79 X10-4	-
UL RATINGS	UL Test Method	Property Value	



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Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		140
Mechanical w/ Impact, C		105
Electrical, C		140

Processing Guidelines

Material Handling

Max. Water content: 0.06%

Although Product is supplied in sealed containers, drying is recommended in applications requiring optimum surface aesthetics. A dehumidifying or desiccant dryer operating at 80 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 280-305 degC (536-581 degF)

Mold Temperature 80-95 degC (176-203 degF)

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

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

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