Product Information

Aug 2013

Ultramid® 8234G HS
Polyamide 6

BASF The Chemical Company

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 fbasis.

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	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.49	
Mold Shrinkage (1/8" bar, in/in)		0.002	
Moisture, %	D-570		
(24 Hour)		0.9	
(50% RH)		1.5	
(Saturation)		5.2	
MECHANICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Tensile Strength, Break, MPa (psi)	D-638		
23C (73F)		230 (33,400)	145 (21,000)
Elongation, Break, %	D-638		
23C (73F)		2	6
Flexural Modulus, MPa (psi)	D-790		
-40C (-40F)		12,300 (1,780,000)	14,700 (2,130,000)
23C (73F)		11,700 (1,700,000)	6,560 (951,000)
65C (149F)		7,000 (1,020,000)	-
121C (250F)		4,830 (700,000)	-
Flexural Strength, MPa (psi)	D-790		
-40C (-40F)		450 (65,200)	410 (59,500)
23C (73F)		352 (51,000)	212 (30,700)
65C (149F)		220 (31,900)	-
90C (194F)		160 (23,200)	-
121C (250F)		138 (20,000)	-
Rockwell Hardness, R Scale	D-785	121	-
IMPACT	**ASTM Test Method**	**Dry**	**Conditioned**
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23C (73F)		134 (2.5)	-
Drop Weight Impact, ft-lbs, 23C	BASF Drop Weight Impact Test	3	-
THERMAL	**ASTM Test Method**	**Dry**	**Conditioned**
Melting Point, C(F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) C(F)	D-648	212 (413)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.31 X10-4	-

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UL RATINGS	UL Test Method	Property Value
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 recommmended in applications requiring optimum surface aesthtics. 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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