

Ultramid® 8231G HS

Polyamide 6

Product Description

Ultramid 8231G HS is a heat stabilized, 15% glass fiber reinforced PA6 injection molding compound. It is also available in non-heat stabilized (Ultramid 8231) and/or pigmented versions. The glass fiber reinforcement enhances performance such as strength, stiffness and heat deflection temperature. The heat stabilizer system extends the properties at elevated temperatures. It also has excellent chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid 8231G HS is ideally suited for more demanding performance applications such as safety helmet parts, washers, gears, engine and motor parts, chutes, and higher temperature environments.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.23	
Mold Shrinkage (1/8" bar, in/in)		0.005	
Moisture, %	D-570		
(24 Hour)		1.4	
(50% RH)		2.3	
(Saturation)		8.1	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Break, MPa (psi)	D-638		
-40C (-40F)		160 (23,200)	170 (24,600)
23C (73F)		140 (20,300)	79 (11,500)
80C (176F)		60 (8,700)	20 (2,900)
121C (250F)		50 (7,250)	40 (5,800)
Elongation, Break, %	D-638		
-40C (-40F)		3	4
23C (73F)		4	9
80C (176F)		8	15
121C (250F)		7	6
Flexural Modulus, MPa (psi)	D-790		
-40C (-40F)		5,860 (850,000)	6,430 (932,000)
23C (73F)		5,310 (770,000)	2,400 (348,000)
65C (149F)		2,400 (348,000)	-
121C (250F)		1,930 (280,000)	-
Flexural Strength, MPa (psi)	D-790		
-40C (-40F)		214 (31,000)	219 (31,800)
23C (73F)		172 (24,900)	101 (14,600)
65C (149F)		110 (16,000)	-
90C (194F)		90 (13,100)	-
121C (250F)		76 (11,000)	-
Rockwell Hardness, R Scale	D-785	121	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		



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23C (73F)		59 (1.1)	-
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	200 (392)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.5 X10-4	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, 1.5mm	UL94	HB	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, C		105	
Mechanical w/ Impact, C		105	
Electrical, C		130	
ELECTRICAL	ASTM Test Method	Dry	Conditioned
Volume Resistivity, 1.5 mm	D-257	>1E13	-

