

Ultramid® 8281 HS GP

Polyamide 6

Product Description

Ultramid 8281 HS GP is an unreinforced, heat stabilized PA6 rotomolding compound. It is available in natural and black and can be painted. It exhibits excellent balance of engineering properties including strength, stiffness, and toughness combined with excellent abrasion resistance and self lubricating characteristics. In addition, the heat stabilizer system extends its retention of properties at elevated temperatures. Chemical resistance is excellent to greases, oils and hydrocarbons. All data is from injection molded specimens with the exception of Drop Weight Impact.

Applications

Ultramid 8281 HS GP is generally recommended for applications such as fuel tanks, chemical storage tanks, hydraulic oil reservoirs, cyclones, and heat resistance containers.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.13	
Mold Shrinkage (1/8" bar, in/in)		0.02	
Moisture, %	D-570		
(24 Hour)		1.3	
(50% RH)		2.7	
(Saturation)		9.5	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
-40C (-40F)		114 (16,500)	100 (14,500)
23C (73F)		72 (10,400)	33 (4,780)
121C (250F)		20 (2,900)	-
Elongation, Break, %	D-638		
23C (73F)		>100	>100
Flexural Modulus, MPa (psi)	D-790		
-40C (-40F)		2,760 (400,000)	2,260 (328,000)
23C (73F)		2,690 (390,000)	685 (99,300)
65C (149F)		530 (76,800)	-
90C (194F)		360 (52,200)	-
121C (250F)		300 (43,500)	-
Flexural Strength, MPa (psi)	D-790		
-40C (-40F)		154 (22,300)	145 (21,000)
23C (73F)		100 (14,500)	32 (4,640)
65C (149F)		30 (4,350)	-
90C (194F)		20 (2,900)	-
121C (250F)		15 (2,170)	-
Rockwell Hardness, R Scale	D-785	116	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40C (-40F)		45 (0.8)	-
23C (73F)		55 (1.0)	-



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Drop Weight Impact, ft-lbs, 23C	BASF Drop Weight Impact Test	50	-
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	60 (140)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.74 X10-4	-

