

Ultramid® 8253

Polyamide 6

Product Description

Ultramid 8253 is an unreinforced, impact modified type 6 graft copolymer developed for both injection molding and extrusion applications. It is also available in heat stabilized (Ultramid 8253 HS) and/or pigmented versions. Copolymerization results in improved dry as molded toughness and increased flexibility to meet higher impact performance compared to conventional unreinforced homopolymers. Good nylon thermal and chemical properties are maintained along with good strength and stiffness retention.

Applications

Ultramid 8253 is generally recommended for applications such as plugs, receptacles, flexible connector covers, weed trimmer components, clips, fasteners, flanges, key housings as well as many flexible tubing applications.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.09	
Mold Shrinkage (1/8" bar, in/in)		0.012	
Moisture, %	D-570		
(24 Hour)		1.5	
(50% RH)		2.3	
(Saturation)		8.1	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
-40C (-40F)		117 (17,000)	116 (16,800)
23C (73F)		65 (9,430)	32 (4,640)
80C (176F)		25 (3,620)	20 (2,900)
121C (250F)		20 (2,900)	-
Tensile Strength, Break, MPa (psi)	D-638		
-40C (-40F)		100 (14,500)	70 (10,200)
23C (73F)		60 (8,700)	-
Elongation, Yield, %	D-638		
-40C (-40F)		7	-
23C (73F)		4	15
80C (176F)		29	-
121C (250F)		34	30
Elongation, Break, %	D-638		
-40C (-40F)		9	20
23C (73F)		>100	>100
Flexural Modulus, MPa (psi)	D-790		
-40C (-40F)		3,050 (442,000)	3,150 (457,000)
23C (73F)		2,210 (320,000)	670 (97,200)
65C (149F)		415 (60,200)	-
90C (194F)		325 (47,100)	-
121C (250F)		260 (37,700)	-
Flexural Strength, MPa (psi)	D-790		



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-40C (-40F)		148 (21,500)	141 (20,400)
23C (73F)		87 (12,600)	32 (4,640)
65C (149F)		25 (3,620)	-
90C (194F)		20 (2,900)	-
121C (250F)		14 (2,030)	-
Rockwell Hardness, R Scale	D-785	82	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40C (-40F)		80 (1.5)	64 (1.2)
23C (73F)		148 (2.8)	NB
Drop Weight Impact, ft-lbs, 23C	BASF Drop Weight Impact Test	200	-
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)	-
Heat Deflection @ 66 psi (.45 MPa) C(F)	D-648	168 (334)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.99 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		85	
Mechanical w/ Impact, C		75	
Electrical, C		105	
ELECTRICAL	ASTM Test Method	Dry	Conditioned
Volume Resistivity, 1.5 mm	D-257	>1E13	-

