

Comparison of ASTM Test Data Using Published Data(3/8/18)

Description	Versatex	Azek	Kleer	Koma (Celuka)	CertainTeed
ASTM Tests Performed	YES	YES	YES	YES	Yes
Length	-0/+1"	-0/+1"	-0/+1"	Not Specified	-0/+1"
Width	+/- 1/32"	+/- 1/16"	+/- 1/32"	Not Specified	+/- 1/16"
Thickness	+/- 1/32"(Published) In Plant +/-0.020	+/- 1/16"	+/- 1/32"	Not Specified	Not Specified
Edge Cut (degrees)	+/- 2 degrees	+/- 2 degrees	+/- 2 degrees	Not Specified	+/- 2 degrees
Density Tolerance	+/- 0.02 grams/ cc	-0/+10%	+/- 10%	Not Specified	-0/+10%
Warranty	Limited Lifetime	Limited Lifetime (Transferable in first 5 years)	Limited Lifetime (no years listed)	25 years (non transferrable)	25 years (non transferrable)
Minimum Density	0.55 g/cc	0.55 g/cc	0.55 g/cc	0.59 g/cc	0.60 g/cc
Water Absorption	<0.50%	0.15%	</= 1.0%	<1.0%	
Tensile Strength	3582 psi	2256 psi		1739 psi	1261 psi
Tensile Modulus	107,000 psi	144,000 psi		113,400 psi	79,463 psi
Flexural Strength	5179 psi	3329 psi		3952 psi	4082 psi
Flexural Modulus	215,600 psi	144,219 psi		192,700 psi	
Modulus of Elasticity	209,500 psi				
Compression Strength	6500 psi (thickness)			2018 psi	
Compression Modulus	2305 Lb/in			90,200 psi	
Elongation	9%				
Nail Hold	398 Lbf/in penetration	35 Lbf/in penetration			66 Lbf/in penetration
Screw Hold	450 Lbf/in penetration	680 Lbf/in penetration			593 Lbf/in penetration
Staple Hold	69 Lbf/in penetration	180 Lbf/in penetration			
Gardner Impact	34 in-lbs	103 in-lbs			16 in-lbs
Charpy Impact (@23 C)		4.5 Ft-Lbs/In			0.1526 Ft-Lbs/In
Notched Izod Impact	0.270 Ft-Lbs/In			0.270 Ft-Lbs/In	
Coeff. of Linear Expansion	0.000032 in/in/F	0.000032 in/in/F		0.000032 in/in/F	0.000032 in/in/F
Rockwell Hardness	55 – 75 thickness dependent				
Burn Rate	Failed to Ignite	Failed to Ignite	Failed to Ignite	Failed to Ignite	Failed to Ignite
Flame Spread Index	<25	<25	<25	25	<25

Heat Deflection Temp.	146	150	143	143	
Oil Canning	Passed	Passed	Passed	Passed	

Notes:

- Versatex ½ thickness and width tolerance of Azek. KOMA tolerances not listed. Klear thickness and width tolerance same as Versatex although Klear’s 5/4 board and sheet are an actual 15/16” (6% less than Versatex before tolerance).
- Versatex offers the only transferrable warranty among those competitors listed here.
- Versatex has higher flexural and tensile strength properties among those competitors listed here (and publish the data).
- Nail, screw and staple pull out are a function of fastener type used in the test, there is no standard. Suffice to say all products have excellent fastener hold strength.
- Versatex has same impact values as KOMA when tested in accordance with IZOD impact test.
- Most PVC’s have a flame spread rating of 25 or less qualifying them as a Class “A” material. However all cellular PVC has a smoke index number greater than 450 qualifying it as a Class “C” material for smoke developed.
- Klear and KOMA have a slightly lower heat deflection temperature than Versatex or Azek. However, the differences are negligible.
- Klear publishes little to no ASTM test data.
- KOMA does not publish any tolerance values for their trim or sheet. Neither KOMA nor CertainTeed publish a thickness tolerance.
- CertainTeed does not publish a heat deflection test value or the results of an oil canning test. All other PVC trim producers listed here do.
- Four of the five PVC trim producers listed here have the same thermal movement value. This means they all expand and contract the same amount. I was unable to find Klear’s value.