

ALTRA® KVS

High Temperature Vacuum Formed Boards and Shapes

ALTRA® KVS high temperature vacuum formed products are available in formulations for service temperatures up to 1800°C. **ALTRA® KVS** boards and shapes feature low thermal conductivity, excellent thermal shock resistance, high purity, good machinability and good density uniformity. **ALTRA® KVS** is formed from alumina and/or alumino-silicate fibers with appropriate inorganic and organic binders. **ALTRA® KVS** products are pre-fired to 1000°C, resulting in an organic free composition.



Properties	Units	ALTRA® GRADE						
		KVS 124	KVS 144	KVS 164	KVS 164/302	KVS 174/400	KVS 184/400	
Classification Temperature	°F	2300	2600	3000	3000	3092	3272	
	°C	1260	1430	1650	1650	1700	1800	
Service Temperature	°F	2012	2372	2732	2912	3092	3272	
	°C	1100	1300	1500	1600	1700	1800	
Density	lbs/ft ³	18	18	18	18	25	25	
	(kg/m ³)	(300)	(300)	(300)	(300)	(400)	(400)	
Linear Shrinkage 24 hrs @ Temperature "+" indicates growth	%	2% @ 1100°C	2% @ 1250°C	1% @ 1500°C	+0.5% @ 1500°C	+0.2 @ 1600°C	0.1% @ 1700°C	
				2% at 1600°C	+1.0 at 1600°C	0.3% @ 1700°C	0.8% @ 1800°C	
Chemical Composition	%							
		Al ₂ O ₃	50	55	65	78	81	80
		SiO ₂	49	44	34	22	19	20
Thermal Conductivity 752°F (400°C) 1112°F (600°C) 1472°F (800°C) 1832°F (1000°C) 2192°F (1200°C) 2552°F (1400°C)	BTUin/hrft ² °F (W/mK)	0.62(0.09)	0.62(0.09)	1.18(0.17)	0.76(0.11)	0.97(0.14)	0.97(0.14)	
		0.83(0.12)	0.83(0.12)	1.25(0.18)	0.97(0.14)	1.18(0.17)	1.18(0.17)	
		1.04(0.15)	1.04(0.15)	1.39(0.20)	1.25(0.18)	1.39(0.20)	1.39(0.20)	
		1.32(0.19)	1.32(0.19)	1.80(0.26)	1.59(0.23)	1.66(0.24)	1.73(0.25)	
		1.73(0.25)	1.66(0.24)	2.36(0.34)	1.94(0.28)	1.94(0.28)	2.01(0.29)	
		2.36(0.34)	2.15(0.31)	3.05(0.44)	2.36(0.34)	2.43(0.35)	2.29(0.33)	

- ▲ All **ALTRA®** grades are available in boards, tubes and other vacuum formed shapes
- ▲ Standard Board Size: 24" x 36", Thickness 1", 1 ½" and 2"
- ▲ Other board sizes and thickness available upon request

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.