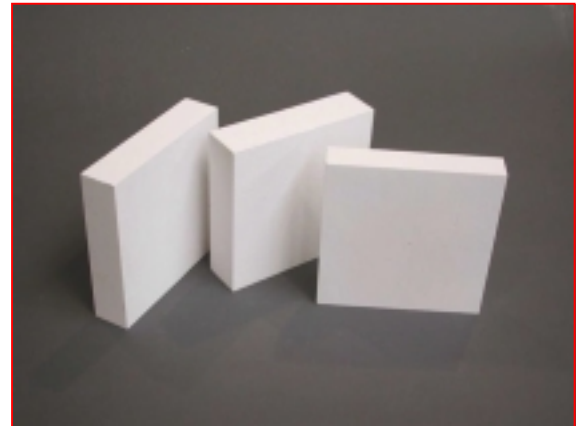


**PRODUCT DATA**
**ALTRA<sup>®</sup> KVR**
**High Alumina Vacuum Formed Boards**

ALTRA<sup>®</sup> KVR high alumina vacuum formed products are available in formulations for service temperatures up to 1550<sup>0</sup>C. ALTRA<sup>®</sup> KVR boards feature low thermal conductivity, good thermal shock resistance, high purity and good density uniformity. ALTRA<sup>®</sup> KVR products are formed from ALTRA<sup>®</sup> 97 alumina fibers with inorganic and organic binders and are pre-fired to remove all organics. Low silica content makes ALTRA<sup>®</sup> KVR ideal for service in reducing atmospheres such as hydrogen or vacuum.



Properties	Units	ALTRA <sup>®</sup> GRADE		
		KVR 164/242	KVR 164/502	KVR 164/702
Maximum Service Temperature	<sup>0</sup> F <sup>0</sup> C	2822 1550	2822 1550	2822 1550
Density	lbs/ft <sup>3</sup> (kg/m <sup>3</sup> )	15 (240)	31 (500)	45 (700)
Linear Shrinkage 24 hrs @ Temperature	%	0.0% @ 1400 <sup>0</sup> C 0.2% @ 1500 <sup>0</sup> C 0.4% @ 1600 <sup>0</sup> C	0.0% @ 1400 <sup>0</sup> C 0.2% @ 1500 <sup>0</sup> C 0.5% @ 1600 <sup>0</sup> C	0.0% @ 1400 <sup>0</sup> C 0.1% @ 1500 <sup>0</sup> C 0.4% @ 1600 <sup>0</sup> C
Thermal Conductivity	W/mK			
752 <sup>0</sup> F (400 <sup>0</sup> C)		0.131	0.176	0.204
1112 <sup>0</sup> F (600 <sup>0</sup> C)		0.162	0.189	0.217
1472 <sup>0</sup> F (800 <sup>0</sup> C)		0.214	0.213	0.239
1832 <sup>0</sup> F(1000 <sup>0</sup> C)		0.280	0.242	0.261
2192 <sup>0</sup> F(1200 <sup>0</sup> C)		0.363	0.286	0.294
2552 <sup>0</sup> F(1400 <sup>0</sup> C)		0.462	0.322	0.326
Chemical Composition	wt%			
Al <sub>2</sub> O <sub>3</sub>		>98%	>98%	>98%
SiO <sub>2</sub>		< 2% *	< 2%*	< 2%*
Other oxides		< 0.2%	< 0.2%	< 0.2%
* Present as mullite at alumina fiber grain boundaries				

- CNC Machining Services available
- Standard Board Size: 24" x 36", Thickness 1", 1 ½ " and 2"
- Other board sizes and thickness available upon request