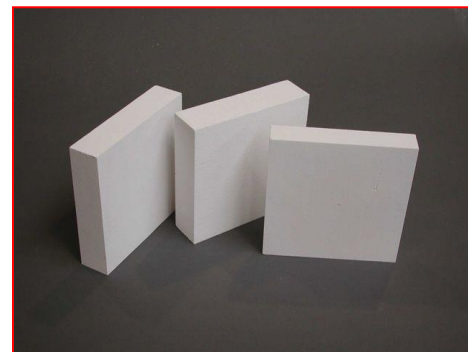


ALTRA® High Density Vacuum Formed Boards

ALTRA® high-density vacuum formed board products are available in formulations for service temperatures up to 1800°C. **ALTRA®** high-density boards are available for high temperature, oxidizing environments (**KVS**) and high temperature, reducing environments (**KVR**). **ALTRA®** boards are formed from alumina or mullite polycrystalline fibers with appropriate inorganic and organic binders. All grades are pre-fired to 1000°C or greater, resulting in an organic free composition. Possible applications include furnace hearth plates and low mass sintering setters.



Properties	Units	ALTRA® GRADE		
		KVS 174/700	KVS 184/700	KVR 164/702
Classification Temperature	°F	3092	3272	2912
	°C	1700	1800	1600
Service Temperature	°F	3092	3272	2822
	°C	1700	1800	1550
Density	lbs/ft ³	45	45	45
	(kg/m ³)	700	700	700
Linear Shrinkage 24 hrs @ Temperature “+” indicates growth	%	0.5@1700°C	0.1@1700°C	1.0@1500°C
		0.7@1750°C	0.2@1750°C 0.7@1800°C	
Thermal Conductivity Hot Wire Method 392°F(200°C) 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)			
		1.11(0.16)	1.04(0.15)	1.45(0.21)
		1.32(0.19)	1.18(0.17)	1.52(0.22)
		NA	1.32(0.19)	1.66(0.24)
		NA	1.52(0.22)	1.80(0.26)
		2.29(0.33)	1.80(0.26)	1.94(0.28)
		2.43(0.35)	1.94(0.28)	2.08(0.30)
		NA	2.15(0.31)	2.21(0.32)
Chemical Composition	%			
		Al ₂ O ₃ SiO ₂	86 14	82 18
Fiber Type		Mullite	Mullite	Alumina

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.