

Buster High Temperature Alumina Insulation

Zircar Buster Aluminum Oxide Fibrous Ceramic Insulation is a rigid, fibrous ceramic material produced by vacuum formed alumina fibers with either a high alumina binder, Buster A, or silica binder, Buster M, to create a mullite bond at high temperatures. Our Buster boards and cylinders have great thermal shock resistance. Both Buster A and Buster M chemistries are offered in a range of densities.

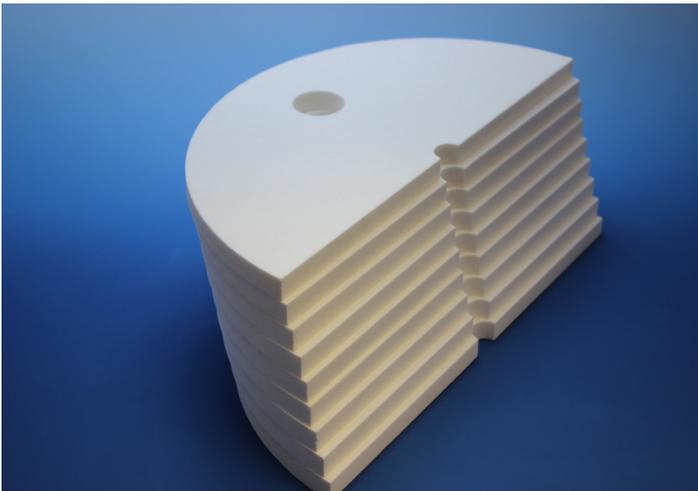
All Buster boards and cylinders are pre-fired for immediate use with no off-gassing. The A2 and M2 options are fired to a higher temperature for lower shrinkage. Their fine grain quality and uniform inorganic binder distribution enables precision machining. All these features make Buster an ideal material for hot face insulation, setters and trays in rapid heat electric furnaces and other types of thermal process systems.

High alumina Buster A can be used in applications where continuous working temperatures are up to 1650 °C and the application is incompatible with silica.

Mullite composition Buster M is a great choice for rapid cycle furnaces due to its resistance to thermal shock. It is also used for custom machining needs where tight tolerances and thin walls are necessary.



Properties (Nominal)	A-15	A-30	A2-30	A-45	M-15	M-30 Cyl	M-35	M2-35	M-45
Bulk Density, lb/ft ³	15	30	32	45	15	30	35	39	45
Bulk Porosity, %	93	85	84	70	93	85	83	80	70
Melting Point, °C (°F)	1870 (3340)								
Continuous Maximum Use Temperature, °C (°F) ⁽¹⁾	1600 (2912)	1600 (2912)	1650 (3002)	1600 (2912)	1650 (3002)	1700 (3092)	1725 (3137)	1800 (3272)	1650 (3002)
Flexural Strength, PSI Normal to Fiber Plane	50	250	280	900	210	460	600	650	1300
Specific Heat, J/kgK (BTU/lb-°F) @93 °C (200 °F)	1047 (0.25)								
Linear Shrinkage, % 1 hr. @ 1700 °C (3092 °F) Perpendicular to Fiber Plane	2	1.4	1.2	3	1	1	0.6	0	2
Thermal Expansion/ °C	7.8 x10 ⁻⁶				7.2 x10 ⁻⁶				
Compressive Strength, PSI @ 10% compression Normal to Fiber Plane	18	100	85	450	30	140	140	120	600
Alumina Content, %	97+				80+				
Thermal Conductivity, W/mK, 250 °C	0.06	0.09	0.09	0.16	0.06	0.09	0.15	0.15	0.16
525 °C	0.08	0.12	0.12	0.20	0.08	0.12	0.19	0.19	0.20
800 °C	0.12	0.16	0.16	0.23	0.12	0.16	0.25	0.25	0.23
1350 °C	0.25	0.23	0.23	0.36	0.25	0.23	0.34	0.34	0.36
1650 °C	0.28	0.27	0.27	0.43	0.28	0.27	0.39	0.39	0.43



Applications

Buster can be used as a complete insulation system in high temperature furnaces. The higher density material is used as a hot face insulation in conjunction with the lower density Buster as backup insulation. The silica free option makes Buster A useful in reducing atmospheres or any other application where silica is a concern. It is also structurally strong enough to be used as combustion chambers and burner liners.

Buster is used for setters or fixturing material where furnace lining can sustain damage due to material contact during firing. Alumina insulation is used as annealing fixtures in specialty metal production processes, and is used in crystal growing.

It is an excellent electrical insulator for heating element contact, as well as thermal barrier and an IR source insulation.

To Place an Order

Call: 845-651-3040

email: sales@zircarzirconia.com

store: www.zircarzirconia.com/store

Buster Boards

Size	Item Number							
	A-15	A-30	A2-30	A-45	M-15	M-35	M2-35	M-45
13"W x 13"L x 0.50"Tk	GJ0002	GA0002	GAA0002	GH0002	GD0002	GB0002	GBA0002	GG0002
13"W x 13"L x 1.00"Tk	GJ0004	GA0004	GAA0004	GH0004	GD0004	GB0004	GBA0004	GG0004
13"W x 13"L x 1.50"Tk	GJ0006	GA0006	GAA0006	GH0006	GD0006	GB0006	GBA0006	GG0006
13"W x 13"L x 2.00"Tk	GJ0008	GA0008	GAA0008	GH0008	GD0008	GB0008	GBA0008	GG0008
9"W x 18"L x 0.50"Tk	GJ0010	GA0010	GAA0010	GH0010	GD0010	GB0010	GBA0010	GG0010
9"W x 18"L x 1.00"Tk	GJ0012	GA0012	GAA0012	GH0012	GD0012	GB0012	GBA0012	GG0012
9"W x 18"L x 1.50"Tk	GJ0014	GA0014	GAA0014		GD0014	GB0014	GBA0014	GG0014
9"W x 18"L x 2.00"Tk	GJ0016	GA0016	GAA0016		GD0016	GB0016	GBA0016	GG0016
18"W x 24"L x 0.50"Tk	GJ0018	GA0018	GAA0018	GH0018	GD0017	GB0018	GBA0018	GG0018
18"W x 24"L x 1.00"Tk	GJ0020	GA0020	GAA0020	GH0020	GD0019	GB0021	GBA0020	GG0020
18"W x 24"L x 1.50"Tk	GJ0022	GA0022	GAA0022		GD0022	GB0022	GBA0022	
18"W x 24"L x 2.00"Tk	GJ0024	GA0024	GAA0024		GD0024	GB0024	GBA0024	



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