

# Buster Blanket

## Alumina and Mullite Ceramic Fiber Blanket Rolls

### The Cost Effective Option for High Temperature Insulation

#### Product Types

- **Buster A Blanket**  
(97%  $Al_2O_3$ )
- **Buster M Blanket**  
(72%  $Al_2O_3$ )

#### Available as Rolls and Sheets

#### Buster Blanket Features

- High Purity Alumina and Mullite Chemistries
- Low Thermal Conductivity
- Excellent Thermal Shock Resistance
- Designed for Uses in Extremely Corrosive, High Temperature Environments
- Extreme High Temperature Stability
- Highly Refractory
- Non-RCF Composition
- Usable in Multiple Atmospheres

#### The **Zircar** Fibrous Ceramics Advantage

Low Mass,  
Low Heat Storage &  
Low Thermoconductivity  
*means*  
High Thermal Shock Resistance,  
High Insulation Performance,  
Higher System Efficiency &  
Lower Energy Costs



### Full Rolls... Sheets... High Temperature...

Fibrous aluminum oxide blankets are available in mullite or high alumina up to 70 feet long.

#### Product Information

Buster Blankets are flexible, high alpha alumina fiber insulation materials. The 72% alumina blanket are 100% fibers while the 97% alumina blanket has been needled into a durable blanket with the addition of an organic fiber reinforcement. All forms have useful properties up to 1600 °C. These polycrystalline fiber blankets offer higher temperature capability, less shrinkage and greater chemical resistance than standard alumina-silica blankets.

The fibers in Buster Blanket are made using the sol-gel process, a chemical procedure used for the fabrication of ceramic materials. The term sol-gel refers to a process in which solid nanoparticles dispersed in a liquid (a sol) agglomerate together to form a continuous three-dimensional network extending throughout the liquid (a gel). This process results in an evenly dispersed cohesive material.

**Buster M** is available in 6 or 8 pounds per cubic foot (PCF) and 1/2" and 1" thicknesses.

**Buster A** is available in 6 PCF and 1/2" and 1" thicknesses.

For more information,  
phone: (845) 651-3040  
email: [sales@zircarzirconia.com](mailto:sales@zircarzirconia.com)  
website: [www.zircarzirconia.com](http://www.zircarzirconia.com)

## Properties & Characteristics

Properties (Nominal)	Buster A Blanket	Buster M Blanket	Buster M Blanket
Bulk Density, lb/ft <sup>3</sup> (g/cm <sup>3</sup> )	6 (0.096)	6 (0.096)	8 (0.128)
Melting Point, °C (°F)	2038 (3700)	1870 (3400)	1870 (3400)
Maximum Use Temperature, °C (°F) <sup>(1)</sup>	1600 (2912)	1600 (2912)	1600 (2912)
Linear Shrinkage %, 6 hr. @ 1500 °C (2735 °F)	<4	0.7	0.7
<b>Thermal Conductivity (Parallel to Thickness)</b>			
W/mk (BTU/hr ft <sup>2</sup> °F/inch) at 1200 °C (2192 °F)	0.315 (2.2)	0.43 (3.0)	0.43 (3.0)
W/mk (BTU/hr ft <sup>2</sup> °F/inch) at 1400 °C (2552 °F)	0.395 (2.7)	0.65 (4.5)	0.65 (4.5)
W/mk (BTU/hr ft <sup>2</sup> °F/inch) at 1600 °C (2912 °F)	0.476 (3.3)	-	-
<b>Chemical Composition, Wt% (Nominal)</b>			
Al <sub>2</sub> O <sub>3</sub>	97	72	72
SiO <sub>2</sub>	3	27	27
Organics	<5	0	0
Trace Elements	<0.5	<0.5	<0.5

<sup>(1)</sup> Maximum use temperature is dependent on variables such as the chemical environment and stresses; both thermal and mechanical.

## Applications

### INSULATION PACKING

Flexible Buster products are useful as insulation packing in furnace spaces, around furnace sight tubes & ports and as filler in expansion joints and masonry cracks. It can be used as a gasket to tighten a seal on a furnace door.

### BACKUP INSULATION

Buster Blanket is used behind the hot face insulation of high temperature furnaces. The low thermal conductivity and compression resistance make blanket useful in conjunction with or as an alternative to rigid insulation.

### FURNACE LINING

Buster Blanket is used as lining in high firing ceramic kilns, aluminum furnaces, reducing atmosphere furnaces, and galvanizing furnaces. It has excellent resistance to alkali and chemical attack.

### FURNACE REPAIR

Buster Blanket can be used to repair an existing lining in a furnace. Whether the lining is rigid insulation or flexible, the blanket can be molded to practically any shape to fit in cracks and spaces.

## Product Samples



### FREE SAMPLES

Call: 845-651-3040

email: [sales@zircarzirconia.com](mailto:sales@zircarzirconia.com)

Product Type	Item #
BUSTER-A 1/2"	GN013
BUSTER-A 1"	GN014
BUSTER-M 6 PCF 1/2"	GP001
BUSTER-M 6 PCF 1"	GP101
BUSTER-M 8 PCF 1/2"	GP205
BUSTER-M 8 PCF 1"	GP201

Samples measure 6"x 6"



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## Custom Design Quotations

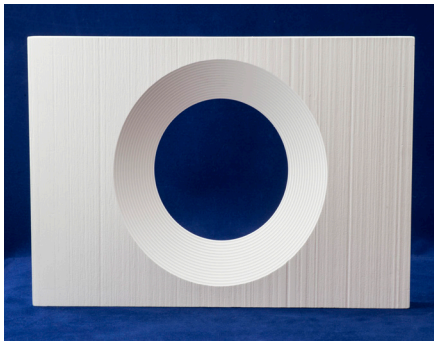
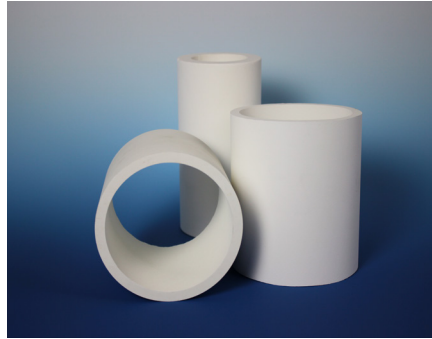
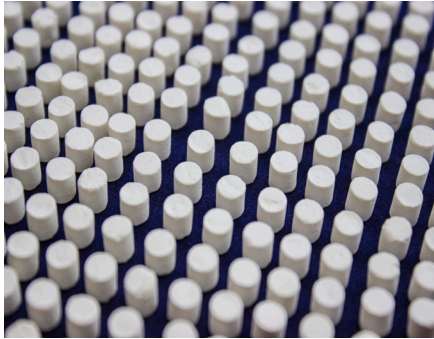
### Contact Us For A Quotation For Your Custom Part

Call: 845-651-3040

email: [sales@zircarzirconia.com](mailto:sales@zircarzirconia.com)

**Zircar** machines custom shapes to your design specifications. Our capabilities include:

- 3D CNC Machining
- Layered Configurations
- Lap Joined Boards and Cylinders
- Diamond Wire Splitting of Cylinders



## Standard Product Sizes & Ordering

Buster Blanket is available in the standard sizes shown below. Please contact our Sales Department for pricing and availability.

### Buster Blanket

Size	Item Number		
	Buster A	Buster M (6 PCF)	Buster M (8 PCF)
18"x 24"x 1/2"Tk	GN001	GP006	GP008
24"x 576" (48')x 1/2"Tk	GN003	GP106	GP206
18"x 24"x 1"Tk	GN004	GP007	GP009
24"x 288" (24')x 1"Tk	GN006	GP103	GP203

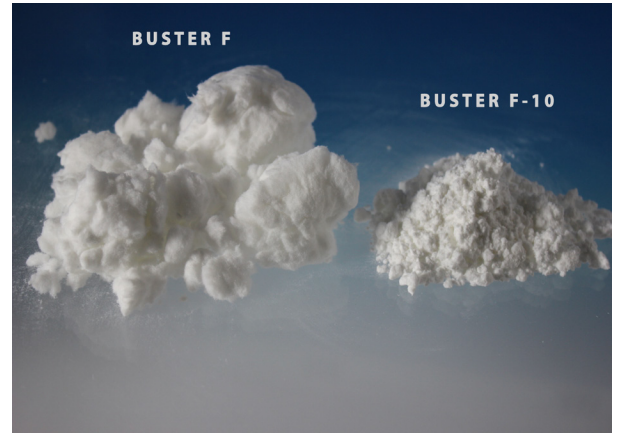


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## Other Interesting Products

Buster Fibers are thermally stable high alpha alumina fibers available in two different bulk densities, both having useful properties up to 1800 °C.



**Zircar** FBD is available in 12" x 12" and 9" x 18", up to 3" thick. FBD is the strongest, highest density, highest temperature rated zirconia fiber board on the market.

Buster Cement is formulated specifically for bonding Buster boards and cylinders to themselves or to back-up thermal insulations such as porous firebrick and alumino-silicate fiber boards. Buster Cement can be mixed with Buster Fiber to repair insulation cracks.



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