

Buster RS

Alumina Composite Refractory Sheet

The Cost Effective Option for High Temperature Insulation

Available in Sizes up to 48" x 48" and Thicknesses up to 2"

Buster RS Features

- 100% Inorganic
- Non-Flammable
- Contains No Asbestos
- High Strength
- No Outgassing Upon Heating
- Withstands Temperatures to 1260 °C
- Good Electrical Resistivity
- High Impact Resistance
- Machinable

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



Structural Strength... Non Asbestos... Machinable...

Fiber reinforced composite material with thermal, structural, and electrically resistive properties.

Product Information

Zircar Buster RS is a fibrous alumina ceramic composite material with uses up to 1260 °C. It has exceptional compressive strength, comparable to high temperature reinforced plastics, however retains its strength and useful life far beyond the maximum temperatures of these plastics. It is also an ideal replacement for asbestos based rigid products. Buster RS has a high alumina content which can resist sticking of molten metals in many environments. This material can be machined to fit your needs. Your custom design can be milled by our machining department to tight tolerances.

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

Properties & Characteristics

Properties (Nominal)	Buster-RS
Color	White
Bulk Density, lb/ft ³ (g/cm ³)	130 (2.1)
Porosity, %	35
Maximum Use Temperature ⁽¹⁾ , °C (°F)	1260 (2300)
Compressive Strength, MPa (psi) @ 10% Compression	69 (10,000)
Thermal Expansion Coefficient, RT -400 °C (752 °F)	6.0 x 10 ⁻⁶ /°C (3.3 x 10 ⁻⁶ /°F)
Linear Shrinkage, % 4 hours at 1200 °C (2200 °F)	1-2
Thermal Conductivity - k	
W/mk (BTU/hr ft ² °F/inch) at 204 °C (400 °F)	0.62 (4.3)
W/mk (BTU/hr ft ² °F/inch) at 427 °C (800 °F)	0.65 (4.5)
W/mk (BTU/hr ft ² °F/inch) at 649 °C (1200 °F)	0.66 (4.6)
W/mk (BTU/hr ft ² °F/inch) at 1010 °C (1850 °F)	0.68 (4.7)
Specific Heat, J/kg °K (BTU/lb °F) at 600 °C (1100 °F)	1172 (0.28)
Chemical Composition (Nominal)	
Oxide	Wt%
Al ₂ O ₃	75
SiO ₂	16
Other Metal Oxides	9

⁽¹⁾ Maximum use temperature is dependent of variables such as stresses, both thermal and mechanical, and the chemical environment that the material experiences.

Applications

- Used as exterior structural insulation in high temperature furnaces. Buster RS serves as a structural element in the [Zircar Hot Spot 110 Lab Furnace](#).
- Buster RS has a good combination of electrical resistivity, strength, and high use temperature, making it an ideal material for terminal blocks and supports for electrical resistor grids exposed to temperatures up to 1260 °C.
- The high alumina content makes it resistant to sticking in applications where molten metal is used.
- Buster RS has a very high compressive strength making it an excellent replacement for rigid asbestos board, plastics, wood, or any other high strength material.
- Used in induction furnaces as coil supports, coil liners, and structural pieces such as tops, front and back plates.
- Buster RS can be used as a hot face insulation in glass tempering and annealing furnaces.
- Used as protective heat shielding in foundry environments.



Zircar Zirconia, Inc.
87 Meadow Road
P.O. Box 287
Florida, New York 10921

Phone: (845) 651-3040
Fax: (845) 651-0074
Email: sales@zircarzirconia.com
www.zircarzirconia.com

Machining

For manual cutting, place the part on a smooth clean surface and hold it in place with gentle pressure. Any tooth blade hand saw can cut the material with relative ease. Holes can be drilled in the material with a standard high speed steel twist drill bit. For easier cutting, power tools with a diamond dry cut blade should be used. Be sure to cut the material in a well ventilated area or dust hood as cutting the material will cause considerable dust. For very close tolerances and large amounts of cutting, CNC machining with solid carbide, carbide tipped or diamond tipped tooling is recommended. Slow feeds and high tool rotation rates are best. It should be noted that the material is very abrasive and will cause rapid wear of high speed steel tooling which could result in an out of tolerance condition in a short period of time. Vacuum hold down should be used with the CNC.

Custom Design Quotations

Contact Us For A Quotation For Your Custom Part

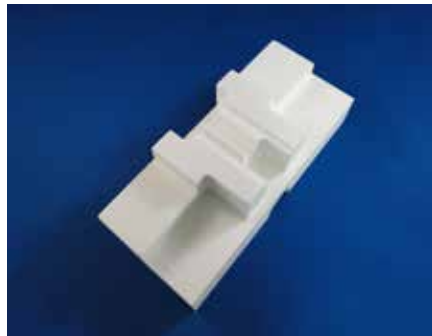
Call: 845-651-3040

email: 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



Zircar welcomes our customers to take advantage of our machining department's expertise for all your custom machining needs.



Zircar Zirconia, Inc.
87 Meadow Road
P.O. Box 287
Florida, New York 10921

Phone: (845) 651-3040
Fax: (845) 651-0074
Email: sales@zircarzirconia.com
www.zircarzirconia.com

Standard Product Sizes & Ordering

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

To Place an Order

Call: 845-651-3040

email: sales@zircarzirconia.com

Buster RS

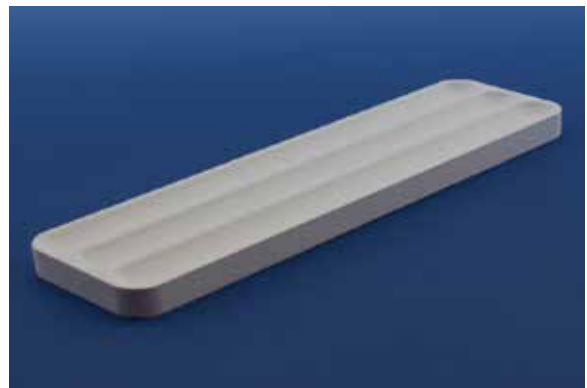
Size	Thickness			
	0.125"	0.25"	0.5"	1.0"
48" x 48"	BKRS0010	BKRS0020	BKRS0030	BKRS0040

Other Interesting Products



Buster Cement is an off white single part alumina adhesive with a useful temperature limit of 1650 °C.

Zircar supplies Buster CXV, a strong, non-fibrous insulation, organic free, lightweight board. It is offered in board form and in your custom machined design.



Zircar Zirconia, Inc.
87 Meadow Road
P.O. Box 287
Florida, New York 10921

Phone: (845) 651-3040
Fax: (845) 651-0074
Email: sales@zircarzirconia.com
www.zircarzirconia.com