



Buster Alumina Cement

High Temperature Alumina Cement

Zircar Buster Alumina Cement is an off white single part alumina adhesive with a useful temperature limit of 1650 °C. It is formulated specifically for bonding **Zircar** Buster A and Buster M Boards and Cylinders to themselves or to back-up thermal insulations such as porous firebrick and aluminosilicate fiber boards. Buster Alumina Cement is composed of milled alumina fibers and sub-micron particles. It is non-flammable, mildly acidic (pH 5) and forms a strong bond upon drying.

For most furnace applications, the articles bonded together are ready for placing in service once the cement has dried. Curing at 426 °C (800 °F) or higher may be desirable to form a ceramic bond that is impervious to water and high humidity. The cured bond joint is stronger than the tensile strength of our 35 pound per cubic foot density alumina insulation, Buster M-35. Pull out or de-lamination due to excessive mechanical or thermal stresses will usually first occur in the insulation material itself.

Directions For Use

Bonding Closely Mated Surfaces

Mix contents thoroughly before using. Clean surfaces to be joined making certain they are free of dust. Thoroughly coat both surfaces to be joined with Buster Alumina Cement using a brush, spatula or trowel. Reapply cement as required until both surfaces remain wet and fluid. Initially, some wicking into porous materials will occur. Push the wet surfaces with enough pressure to force some cement to flow out. Use a knife or spatula to clean the excess cement away from the bond. Dry the joined pieces thoroughly before moving or placing into service. The time required to dry varies from a few minutes to a day or more, depending on the size of the part and humidity. Drying may be accelerated by heating, do not exceed 90°C (200 °F). Complete the curing of the bond by firing to a minimum of 426 °C (800 °F). In most cases this curing can be accomplished in the initial heating cycle. For a 0.03 inch thick bond, a pint of cement will cover about 7 square feet of joint surface. For the best bond, do not pre moisten the surfaces to be joined.

Filling Holes or Bonding Mismatched Surfaces Greater than 1/16 Inch

Make a thick paste by mixing one fluid ounce (about 30 cc) of Buster Alumina Cement with 6 grams of lightly crushed Buster Board or Buster Fiber. Spread the paste into the void using a spatula or trowel. Dry and cure at a somewhat slower rate than outlined above.



Properties & Characteristics

Properties (Nominal)	Buster Alumina Cement
Melting Point, °C (°F) ⁽¹⁾	1870 (3400)
Maximum Use Temperature, °C (°F) ⁽¹⁾	1650 (3000)
Solids Content, Wt%	70
Weight Per Pint, grams (lbs)	953 (2.1)
Specific Gravity, g/cc	1.95
Cured Chemical Composition Wt% (Nominal)	
Al ₂ O ₃	98.5
SiO ₂	0.5
Na ₂ O	0.5
B	0.33
Trace Inorganics	<0.1

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



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