



# Alumina Cement Type HITAC-4

## General Information

ZIRCAR Ceramics' Alumina Cement Type HITAC-4 is a single-part water-based alumina adhesive specifically developed for bonding low-density fibrous ceramic insulation materials together without shrinking and adding significant mass. HITAC-4 is a white, creamy sticky material that remains workable for an extended period of time and forms a tenacious bond upon drying. Thin layers of it can be applied with a brush, paint roller or sprayer. Once fired to 425°C (800°F), HITAC-4 exhibits a bond that is stable to re-exposure to water and remains stable in application temperatures as high as 1425°C (2597°F). As HITAC-4's solids will settle with time, contents of entire container should be aggressively mixed prior to use. Shelf life in sealed original container - 12 months.



## Characteristics & Properties

Color	White
Typical Solids Composition, %	
Al <sub>2</sub> O <sub>3</sub>	73
SiO <sub>2</sub>	19
K <sub>2</sub> O	8
Solids Content, %	~65
pH	10
Specific Gravity, g/cc	1.8
Maximum Use Temperature*, °C (°F)	1425 (2597)

The data presented herein is intended to help the user to determine the appropriateness of this material for their application. This data is a nominal representation of this product's properties and characteristics and therefore should not be used in preparing specifications.

\* Maximum use temperature is dependent on variables such as stresses, both thermal and mechanical, and the chemical environment that the material experiences.

## Suggested Applications

Bonding ZIRCAR Ceramics fibrous ceramic materials together and to other materials with porous surfaces.

Coating surfaces of boards, blankets and papers for improved hardness, and resistance to abrasion and chemical attack.

Forming of shapes (rigid tubes, boats, setters, supports, process fixtures etc.) by bonding of rigid and flexible ZIRCAR Ceramics fibrous ceramic materials.

Bonding agent in manufacture of high-alumina composites and laminates.

## ZIRCAR Ceramics, Inc.

PO Box 519

100 N. Main St., Florida, NY 10921-0519

Telephone: (845) 651-6600

E-mail: sales@zircarceramics.com

Technical Data Bulletin

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[www.zircarceramics.com](http://www.zircarceramics.com)

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## Application Instructions - Bonding

- 1) Clean surfaces to be joined or coated, making certain they are free of oil, starch, etc.
- 2) Mix contents thoroughly before using.
- 3) Apply cement thoroughly and evenly to all cleaned surfaces to be joined or coated. Reapply cement as required until surfaces remain wet and fluid. Initially, some wicking into porous materials will occur.
- 4) When bonding parts, contact wet surfaces using slight pressure to assure match of parts.
- 5) Dry the joined or coated 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 and ability to dry out the part. Drying may be accelerated by heating or oven drying at no greater than 90°C (200°F).
- 6) Curing occurs when bonded parts are heated to 425°C (800°F).

## Application Instructions - Spray coating

- 1) For best results apply HITAC-4 in thin layers using an HVLP gravity-fed sprayer system.

## Availability of Standard Cement

ITEM #	DESCRIPTION
C4015	HITAC-4, Qt
C4020	HITAC-4, Gal

## To Order

**Standard items:** order online or specify quantity, item # and description.  
Standard items are available for immediate shipment from stock.

**Custom preparations** such as 5-gallon buckets and 55-gallon drums are available.



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[www.zircarceramics.com](http://www.zircarceramics.com)

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