



# High Temperature Fibrous Ceramic Materials & Products

ZIRCAR Ceramics, Inc.  
New York, USA

ZIRCAR Ceramics, Inc. is a New York, USA based manufacturer and international marketer of a wide range of engineered high temperature materials. With a 40 year history as a producer of some of the most advanced ceramic fiber-based thermal, electrical and structural insulation materials, the spectrum of markets served and the depth of our experience and expertise in our field is tremendous.

## Product Forms Include:

### Rigid Insulation Products:

Boards, Cylinders, Custom Formed Sizes and Shapes, Precision CNC Machining.

### Flexible Insulation Products:

Papers, Blankets, Textiles in custom die-cut shapes, sheets, partial and full rolls.

**Cements, Rigidizers & Moldable Products:** Standard and Custom Bonding and Coating Cements, Mastics and Moldables.

### Furnace Building Accessories:

Heating Element Holders and Electrical Straps, Hearth Plates, Ceramic Reinforcing Hardware.

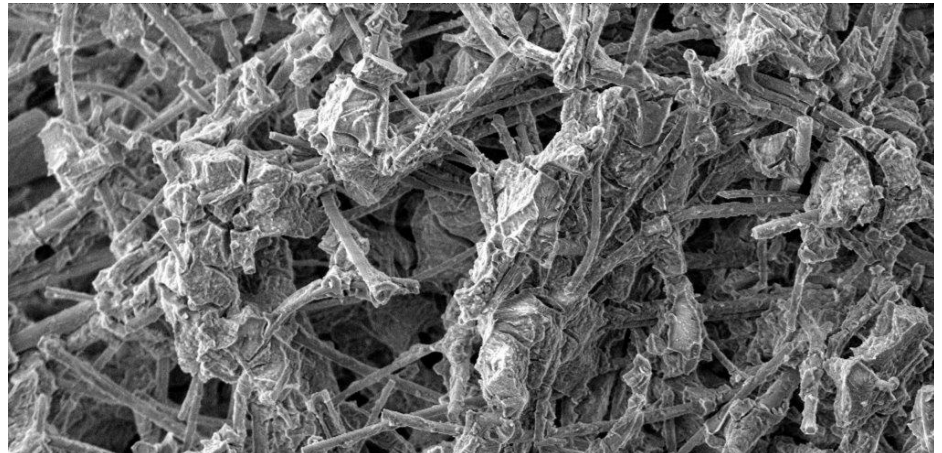
### Furnace Insulation Assemblies:

Custom Engineered & Assembled ZIRCAR Ceramics Insulation Systems - makes furnace building easy!

### Heating Elements:

MoSi<sub>2</sub> & Resistance Wire, Custom Fiber Insulated Heaters.

**Thermal stability and refractoriness are possible with a properly engineered and applied combination of fiber and binder. This is the foundation of ZIRCAR Ceramics, Inc.**



Fiber, refractory binders and ceramic fillers sintered at high temperatures become strong and very stable thermal insulators. Shown above is ZIRCAR Ceramics' Alumina Type SALI at 250X magnification.

## Markets Served:

**Furnaces:** Rapid Cycle with Temperatures to 1825°C.

**Aerospace:** Radome and Nozzle Insulation.

**Glass & Ceramics:** Thermal Treatment and Sintering.

**Crystals:** Growing and Annealing Furnaces.

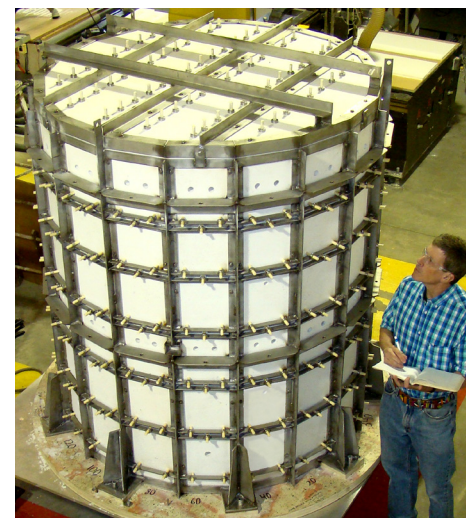
**Scientific Analytical Devices:** Insulation and Heaters.

**R&D:** Corporate, Government and Academic Material Science Research.

**Alternative Energies:** Fuel Cells and Solar.

**Many More!**

## The Largest 1800°C Chamber Ever Built!



Ask how we can put this exciting technology to work for you today. Thank You!

**e-mail: [sales@zircarceramics.com](mailto:sales@zircarceramics.com) [www.zircarceramics.com](http://www.zircarceramics.com)**



# High Temperature Fibrous Ceramic Materials Thermal, Structural & Electrical Insulation

## Rigid Products

ZIRCAR Ceramics offers an extensive range of cost effective high performance rigid insulation products - many that outperform all others - hands down!

$Al_2O_3$  products with legendary heritage of high performance include: **SALI**, **SALI-2**, **ZAL-45**, **AL-25/1700** - optimum densities and low CTEs for low thermal conductivity, excellent hot strength and long life to 1825°C.

$Al_2O_3$ - $SiO_2$  products include an extensive range of engineered combinations of high purity refractory ceramic fibers and inorganic refractory binders in many densities and sizes to temperatures to 1420°C.

$SiO_2$ - $CaO$ - $MgO$  "Soluble" fiber products give customer an extended range of products from which to choose - to 1200°C.



Multi-layer 1700C rapid cycle furnace insulation systems made of ZIRCAR Ceramics' Alumina Type **SALI**, Alumina Type **ZAL-15**, Alumina-Silica Type **ECO-1200B** provide clean, long lasting furnace environments - as required in applications involving the heat treatment and sintering of specialty glasses and advanced technical ceramics.



Type **ZAL-45** exhibits high strength, fine texture to 1600°C.



Type **Uniform-A1** made in 30" x 60" x 3" format to 1260°C.

## Flexible Products

Polycrystalline  $Al_2O_3$  fiber is used exclusively in ZIRCAR Ceramics' flexible  $Al_2O_3$  paper and blanket products.  $Al_2O_3$ ,  $Al_2O_3$ - $SiO_2$  and  $SiO_2$  textiles are also available.

$Al_2O_3$  Paper Types **APA-1**, **APA-2** and **APA-3** are manufactured of shot free 1650°C fiber available in a variety of sheets and rolls.

$Al_2O_3$  Blanket Types **NMB** and **NAB** are uniquely strong mechanically needed blankets with useful properties to 1600°C.

$Al_2O_3$  Textile Type **AS-7M** retains 100% of its strength to 1200°C.



$Al_2O_3$  Paper Type **APA-1** and  $Al_2O_3$  Blankets Types **NMB** and **NAB** are offered in sheets, partial and full rolls and in die-cut configurations.



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# High Temperature Fibrous Ceramic Materials Thermal, Structural & Electrical Insulation

## Cements, Rigidizers, Coatings & Moldables

ZIRCAR Ceramics' wide range of high temperature products enable customers to bond, coat and harden all varieties of ceramic fiber based products.

Al<sub>2</sub>O<sub>3</sub> Rigidizer/Hardener Type **AL-R/H** and Al<sub>2</sub>O<sub>3</sub> Cements Type **AL-CEM** and NEW Type **AL-CEMXT** are ultra high purity products, bringing utility to bonding, coating and hardening applications with temperatures to 1800°C.

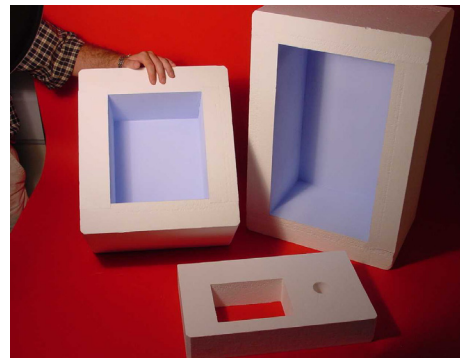
SiO<sub>2</sub> Rigidizer Type **SI-RIG** is an ammonia stabilized colloidal silica used to harden the surfaces of fibrous ceramic materials.

Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Cement Type **AS-CEM** works to significantly harden and reduce particulate generation to temperatures of 1260°C.

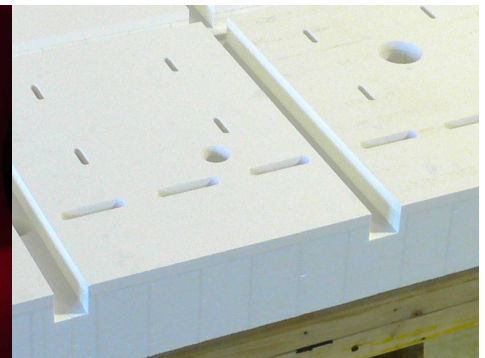
Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Moldable Type **AX-Moldable** forms a very strong bond when building fiber board structures.



An appropriate application of a coating cement or rigidizer, such as **AS-CEM** on **AXHTM** (shown above) will contribute to enhancing the strength, hardness and relative cleanliness of ceramic fiber products.



**Uniform-A1** tundishes bonded with **AX-Moldable** Cement.



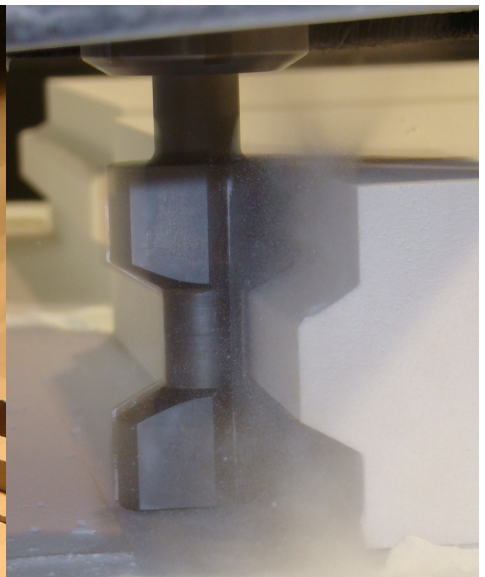
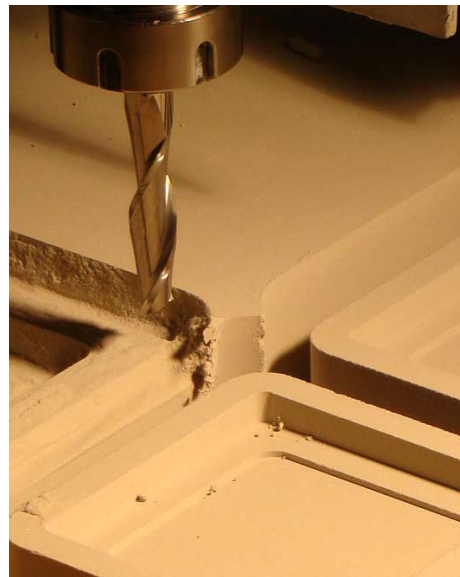
**AL-25/1700 BIG BLOCKS** laminated with **AL-CEMXT**.

## Precision CNC Fabrication - Very Fast Turn Around On Prototypes!

**Five CNC Milling Stations**, a fully equipped finishing department working two shifts a day, 5 days a week - means thousands of precision cut parts for a very large number of satisfied customers.

In addition to machining our own products we are experienced in machining other materials including: **Calcium Silicate** Cement Boards, **Microporous** Silica Insulation and Refractory and Insulating **Bricks**.

Contact **ZIRCAR Ceramics** today for a quote on your next custom insulation requirements.



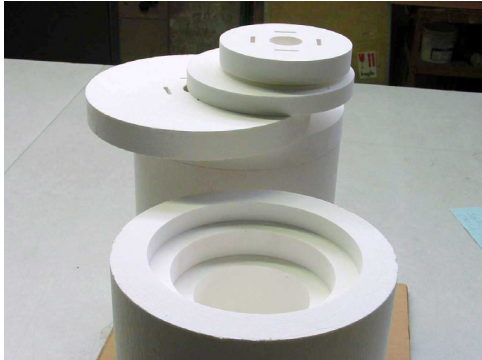
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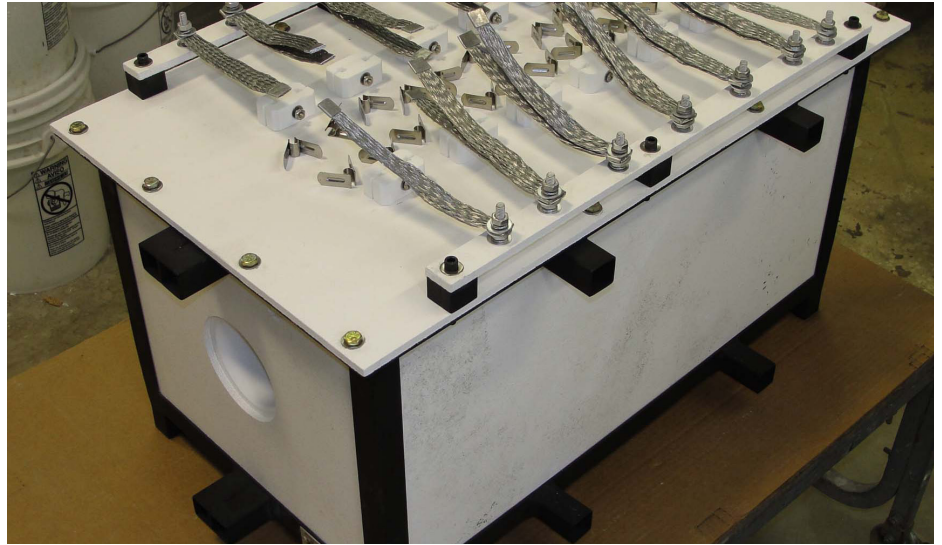
# High Temperature Fibrous Ceramic Materials Thermal, Structural & Electrical Insulation

## Engineered Insulation Assemblies & Furnace Chambers.

ZIRCAR Ceramics works very closely with OEM Furnace Builders and end user alike on the design and fabrication of complete preassembled insulation assemblies.



This vertical crystal growing furnace insulation assembly is constructed of a layered system of **SALI, ALC, ASH** - to 1700°C.



This assembly is used to grow Carbon Nanotubes at 1600°C.

Please visit our e-commerce enabled website to see our complete technical library and to purchase standard items online.  
**[www.zircarceramics.com](http://www.zircarceramics.com)**



ZIRCAR Ceramics' 74,000 sq. ft. of facilities include our corporate headquarters, 7 vacuum forming systems, CNC machine shop, board processing, die-cutting, R&D-Quality Labs, shipping and receiving in Florida, NY and in Chester, NY - approximately 100 KM Northwest of New York.

### Proudly Represented By:



# Zircar<sup>®</sup> CERAMICS

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