

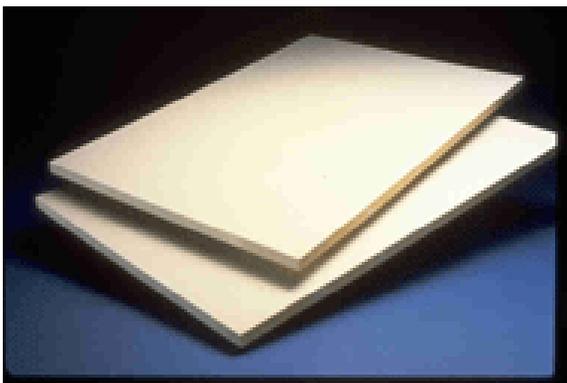


*Union Fortune International Limited*  
集富國際有限公司

www.union-fortune.com

高温隔热材料专家

The Best Solution of High Temperature Insulation



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# 高温隔热材料

## High Temperature Insulation Materials

集富国际有限公司是著名的高温陶瓷纤维绝热材料和工程技术服务的供应商。我们致力为我们的客户提供高品质的产品 and 高温管理的解决方案。

我们的产品系列包括陶瓷纤维，绿色环保型（可溶解于人体肺液）的环保纤维，和其它与热工工程配套的轻质耐火材料。

历经多年的热能工程的施工和服务，集富国际累积了丰富的高温管理经验，已具备了良好的热工分析能力，工程设计、工程监理，和安装管理能力。集富国际在为客户提供优质的陶瓷纤维和绿色环保纤维制品的同时，可以为客户提供专业的热工分析，炉衬设计，整体工程设计，安装监理和工程施工等服务。集富国际提供的优质产品和服务已经被广泛应用于钢铁，铝工业，玻璃陶瓷，电力，家用电器，废气燃烧，和商业防火等行业。

集富国际在山东设有生产基地和服务中心，将致力于用自己的专业知识为客户提供更加优质的热工工程和服务。

专业出众，卓越服务  
品质优异，价格合理！

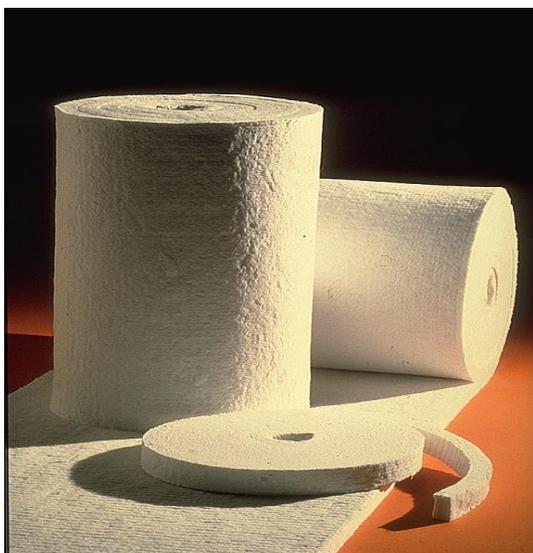
Union Fortune International Limited, is a leading supplier of ceramic fiber and high temperature solution for industrial thermal needs. We commit to provide our clients with high temperature solution and service.

We supply a full range of products include refractory ceramic fiber, soluble fiber, and other complimentary low thermal refractory.

We also provide heat flow analysis, design, engineering supports, and project inspections for our clients in the following sectors:  
Aluminum, Iron & Steel, Ceramic/Glass  
Domestic Appliance, Power & Incineration,  
Petrochemical, and Passive Fire Protection.

With our advanced manufacturing base in China and sales offices in Hong Kong and Shandong, we commit to serve our clients better with our knowledge and experience in wide variety applications.





## 陶瓷纤维毯 Ceramic Fiber Blanket

We supply lightweight needled blankets from our spun fibers. Our blankets offer you excellent Insulating performance, easy installation, and excellent energy saving. Our blankets are available in various chemistry, density, and thickness combinations.

集富陶瓷纤维毯产品是高强度的针刺绝热纤维毯。陶瓷纤维毯具有良好的绝热性能，并且容易安装，给您轻松提供能源节省的解决方案。本陶瓷纤维毯材料具有多种厚度，宽度和密度规格供您选择。

### 产品特性:

- × 良好的化学稳定性，抗侵蚀性能好
- × 重量轻，弹性好
- × 导热率低，蓄热性低
- × 良好的抗拉强度，优异的抗热冲击性能
- × 良好的抗热震性，优异的吸音性能

### 产品应用:

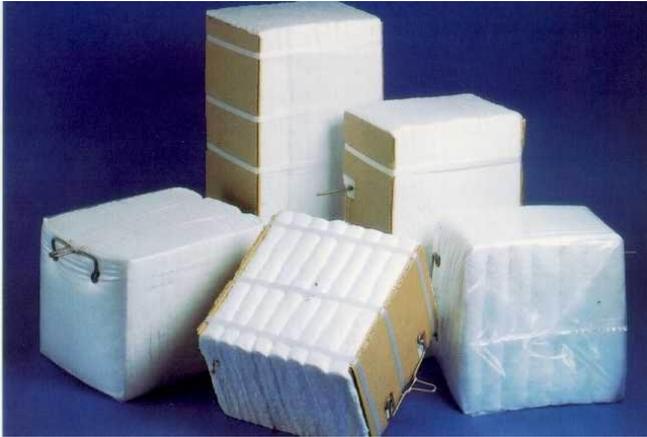
- × 各种高温窑炉的绝热炉衬，
- × 工业窑炉相关的填塞应用
- × 熔模铸件包裹材料
- × 高温管道或燃气轮机的绝热材料
- × 商业建设的防火材料
- × 管道和窑炉相关的密封
- × 高温过滤应用

### Characteristic:

- \* Excellent chemical stability,
- \* Excellent corrosion resistance
- \* Light weight with good resilience
- \* Excellent tensile strength
- \* Excellent thermal shock resistance
- \* Low conductivity and heat storage
- \* Excellent sound absorption

### Application:

- \* Furnace-related linings, fill and packing materials for furnace related applications
- \* Casting mold wrappings
- \* High-Temperature pip or turbine insulations
- \* Commercial fire protection
- \* Tube and furnace-related seals
- \* High-temperature filtration



## 陶瓷纤维模块 Ceramic Fiber Module

Union Fortune module system is a full range of modules designed to meet a wide range of heat process applications. Our modules are available in various chemistry and density combinations.

集富绝热模块是采用陶瓷纤维针刺毯通过折叠或切片层叠制作而成的系列模块产品，专为各种不同需求的热加工设备和工业窑炉应用而设计制作的。

Ceramic fiber modules are constructed with different grade ceramic fiber blankets to meet different application requirements. For these specific modules, we might use different anchor system to meet specific customer needs.

根据不同的工况要求，我们采用不同等级的纤维毯进行模块设计制作。各种温度等级的模块在不同的热工设备中，采用不同的模块锚固件系统，以适应不同的应用需求。

Characteristic:

- \* Lightweight, easy to install and maintenance
- \* Excellent thermal shock resistance
- \* Low conductivity and heat storage
- \* Excellent Insulation for lower energy cost

产品特性（相对其它耐火材料）：

- × 重量轻，容易安装和维护
- × 隔热性能优异—导热率低，蓄热性低
- × 良好的机械性能，优异的抗热冲击性能

Application:

- \* Furnace-related linings,
- \* Fuse conduct lining
- \* Ladle cover
- \* Ladle pre-heater

产品应用：

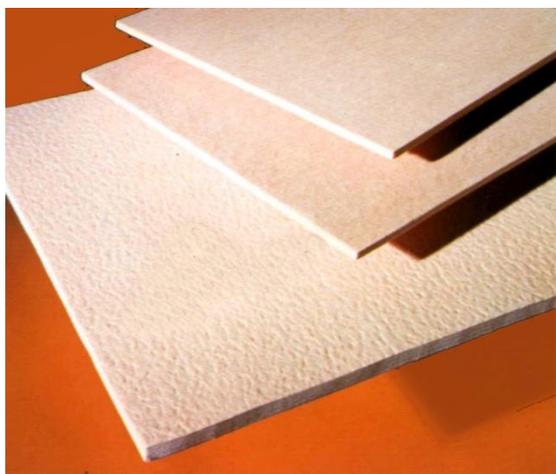
- × 各种高温窑炉的绝热炉衬，
- × 钢包包盖
- × 烟道绝热内衬
- × 钢包烤烘器



# 产品特性和规格（毯和模块）

|                                                                 | Kaolin                                    |        |                      | HP K    | HP S                 | AZS     | Fibermax |
|-----------------------------------------------------------------|-------------------------------------------|--------|----------------------|---------|----------------------|---------|----------|
|                                                                 | 普通                                        | 标准天然   | 高纯天然                 | 1260 K  | 1260 S               | 锆铝棉     | 1650多晶   |
| Temp Grade<br>分类温度 (°C)                                         | 1260                                      | 1260   | 1260                 | 1260    | 1260                 | 1430    | 1650     |
| Melting Point °C 熔点                                             | 1760                                      | 1760   | 1760                 | 1760    | 1760                 | 1760    | 1760     |
| Color 颜色                                                        | 淡黄                                        | 淡黄     | 白 White              | 白 White | 白 White              | 白 White | 白 White  |
| Working temperature<br>工作温度 (°C)                                | 1000                                      | 1050   | 1100                 | 1150    | 1176                 | 1343    | 1560     |
| Fiber Diameter<br>(microns) 直径                                  | 3-6                                       | 3-6    | 3-6                  | 3-6     | 3-6                  | 3-6     | 3-6      |
| Chemical composition 化学成分                                       |                                           |        |                      |         |                      |         |          |
| Al <sub>2</sub> O <sub>3</sub>                                  | 41-47%                                    | 41-48% | 47-51%               |         | 43-47%               | 29-31%  | 72%      |
| SiO <sub>2</sub>                                                | 49-57%                                    | 49-58% | 49%-52%              |         | 53-57%               | 53-55%  | 28%      |
| ZrO <sub>2</sub>                                                |                                           |        |                      |         |                      | 15-17%  |          |
| Fe <sub>2</sub> O <sub>3</sub>                                  | <1.5%                                     | <1.5%  | <1%                  | <0.5%   |                      |         |          |
| Thermal Conductivity 导热系数 (W/mK), ASTM C201 -Mean Temp (使用平均温度) |                                           |        |                      |         |                      |         |          |
|                                                                 | 96kg/m <sup>3</sup>                       |        | 128kg/m <sup>3</sup> |         | 160kg/m <sup>3</sup> |         |          |
| 600                                                             | 0.15                                      |        | 0.12                 |         | 0.11                 |         |          |
| 800                                                             | 0.22                                      |        | 0.2                  |         | 0.18                 |         |          |
| 100                                                             | 0.31                                      |        | 0.27                 |         | 0.21                 |         |          |
| 1200 (仅针对1430毯)                                                 | 0.44                                      |        | 0.36                 |         | 0.33                 |         |          |
| Density (容重) kg/m <sup>3</sup>                                  | 64、96、128、160、192                         |        |                      |         |                      |         |          |
| Dimension (尺寸)<br>mm                                            | 7320×610/1220×6/13/25、3660×610/1220×38/50 |        |                      |         |                      |         |          |

|                                  | Kaolin                                    |         | HP K    | HP S    | AZS     | Fibermax |
|----------------------------------|-------------------------------------------|---------|---------|---------|---------|----------|
|                                  | 标准天然                                      | 高纯天然    | 1260 K  | 1260 S  | 1430锆   | 1650多晶   |
| Temp Grade<br>分类温度 (°C)          | 1260                                      | 1260    | 1260    | 1260    | 1430    | 1650     |
| Melting Point °C 熔点              | 1760                                      | 1760    | 1760    | 1760    | 1760    | 1760     |
| Color 颜色                         | 淡黄                                        | 白 White  |
| Working temperature<br>工作温度 (°C) | 1050                                      | 1100    | 1150    | 1176    | 1343    | 1560     |
| Density (容重) kg/m <sup>3</sup>   | 128、160、192、210、240                       |         |         |         |         |          |
| Dimension (尺寸)                   | 7320×610/1220×6/13/25、3660×610/1220×38/50 |         |         |         |         |          |



## 陶瓷纤维板 Ceramic Fiber Board

集富陶瓷纤维板是采用陶瓷纤维及粘结剂通过湿法真空成型制成。陶瓷纤维板具有良好的绝热性能，并且容易安装，给您轻松提供能源节省的解决方案。陶瓷纤维板具有多种温度等级、厚度、宽度和密度规格供您选择。

### 产品特性：

- × 重量轻，容易安装和维护
- × 隔热性能优异—导热率低，蓄热性低
- × 良好的机械性能，优异的抗热冲击性能

### 产品应用：

- × 各种高温窑炉的绝热炉衬，
- × 背衬绝热材料
- × 硬质隔热密封垫
- × 家用电器的隔热绝缘材料

Union Fortune ceramic fiber boards are manufactured in a vacuum forming wet process by using ceramic bulk fiber and colloidal binder. Ceramic fiber boards offer you excellent Insulating performance, easy installation, and excellent energy saving. Our blankets are available in various chemistry, density, and thickness combinations.

### Characteristic:

- \* Lightweight, easy to install and maintenance
- \* Excellent thermal shock resistance
- \* Low conductivity and heat storage
- \* Excellent mechanical performance

### Application:

- \* Furnace-related linings,
- \* Insulating back up lining
- \* Rigid gasket and seals
- \* Insulation for Domestic Appliance

|                                                     | 1000纤维板<br>1000 Board                       | 1260纤维板<br>1260 Board | 1400纤维板<br>1400 Board |
|-----------------------------------------------------|---------------------------------------------|-----------------------|-----------------------|
| Temp Grade 分类温度 (°C)                                | 1260                                        | 1260                  | 1430                  |
| Melting Point °C 熔点                                 | 1760                                        | 1760                  | 1760                  |
| Color 颜色                                            | Light Gray                                  | White 白               | White 白               |
| Working temperature 推荐使用温度 (°C)                     | 1000                                        | 1100                  | 1345                  |
| Permanent liner shrinkage% 加热线收缩                    | 950°C*24h<3                                 | 1100°C*24h<3          | 1300°C*24h<3          |
| Thermal Conductivity (W/m*K) 导热系数                   | 0.16 (600°C) ; 0.23 (800°C) ; 0.33 (1000°C) |                       |                       |
| Available Density (kg/ m3) 密度                       | 220±50                                      | 250±50                | 250±50                |
| Available thickness (mm) 厚度                         | 13, 25,38, 50                               | 13, 25,38, 50         | 13, 25,38, 50         |
| Width*Length (mm)                                   | 1000/600*600                                |                       |                       |
| 化学成分                                                |                                             |                       |                       |
| Al <sub>2</sub> O <sub>3</sub> %                    | 35-40%                                      | 40-44%                | 44-51%                |
| Al <sub>2</sub> O <sub>3</sub> + SiO <sub>2</sub> % | 95-98%                                      | 95-98%                | 95-98%                |



# 陶瓷纤维散棉

## Ceramic Fiber — Bulk

Union Fortune bulk fibers are made of kaolin mineral or high purity alumina-silica materials through spun or blown technology. Bulk fiber shows high-temperature stability, lightweight, low heat storage, and excellent thermal shock resistance. Our bulk fiber also has excellent chemical stability to oxidation and reduction and outstanding sound absorption.

集富陶瓷纤维散棉由天然的高岭土或高纯的氧化铝和硅沙混成料通过甩丝或喷吹工艺制作而成。陶瓷纤维散棉具有良好的高温稳定性，轻质，良好的绝热性能和抗热冲刷能力。散棉还有良好的化学稳定性。

### 产品特性:

- × 良好的的化学稳定性，抗侵蚀性能好
- × 重量轻，弹性好
- × 导热率低，蓄热性低
- × 良好的抗拉强度，优异的抗热冲击性能
- × 良好的抗热震性，优异的吸音性能

### 产品应用:

- × 湿法真空制品的原材料
- × 填塞材料
- × 特殊涂料的原材料

### Characteristic:

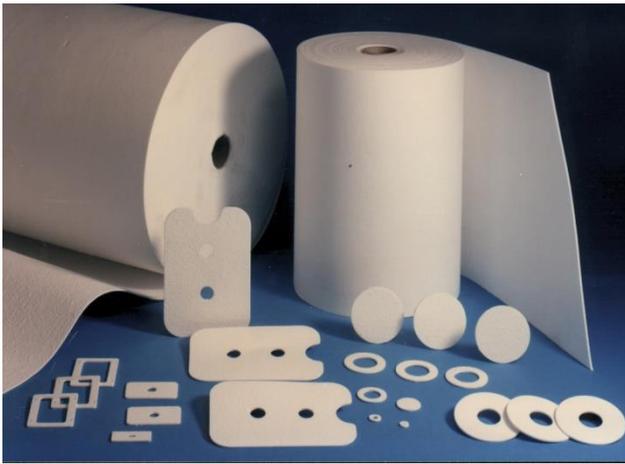
- \* High temperature stability
- \* Low thermal conductivity
- \* Low heat storage
- \* Excellent thermal shock resistance
- \* Superior corrosion resistance
- \* Excellent sound absorption

### Application:

- \* Feed stock of vacuum forming
- \* Fill and pack materials
- \* Feed stock of special cements

|                                  | Kaolin |         | High Purity | AZS     |
|----------------------------------|--------|---------|-------------|---------|
|                                  | 标准天然   | 高纯天然    | 高纯棉         | 锆铝棉     |
| Temperature Grade<br>分类温度 ( °C)  | 1260   | 1260    | 1260        | 1430    |
| Melting Point °C 熔点              | 1760   | 1760    | 1760        | 1760    |
| Color 颜色                         | 淡黄     | 白 White | 白 White     | 白 White |
| Working temperature<br>工作温度( °C) | 1050   | 1100    | 1176        | 1343    |
| Fiber Diameter<br>直径(microns)    | 3—6    | 3—6     | 3—6         | 3—6     |
| Chemical composition 化学成分        |        |         |             |         |
| Al <sub>2</sub> O <sub>3</sub>   | 41-47% | 45-51%  | 46-53%      | 26-30%  |
| SiO <sub>2</sub>                 | 49-57% | 49%-57% | 47-54%      | 51-56%  |
| ZrO <sub>2</sub>                 |        |         |             | 15-17%  |
| Fe <sub>2</sub> O <sub>3</sub>   | <2%    | <1.5%   | <1.5%       | <0.5%   |

# 陶瓷纤维纸 Ceramic Fiber Paper



集富陶瓷纤维纸采用非织造的造纸法制成。陶瓷纤维纸具有良好的绝热效果，可以为您提供灵活的高温能源管理和能源节省的解决方案。

陶瓷纤维纸具有优异的隔热性能，导热率低，高温稳定性良好，重量轻，柔软可弯折的特性。陶瓷纤维板具有多种温度等级、厚度、宽度和密度规格供您选择。

#### 产品特性：

- × 良好的化学稳定性，抗侵蚀性能好
- × 重量轻，弹性好
- × 导热率低，蓄热性低
- × 反热率高
- × 非传导性强
- × 良好的抗拉强度，优异的抗热冲击性能
- × 良好的抗热震性，优异的吸音性能
- × 容易重迭，成型及剪裁

#### 产品应用：

- × 高热模具和工具的包裹材料
- × 背衬绝热材料
- × 柔性隔热密封垫
- × 家用电器的隔热绝缘材料

Union Fortune Ceramic Fiber papers are made from our blown fibers utilizing non-woven matrix process. With these excellent fiber paper, we can supply you with flexible solutions for your energy saving and high-temp management.

Our papers offer you excellent insulating performance with low thermal conductivity and high temperature stability, flexibility, and excellent energy saving. Our papers are available in various chemistry, density, and thickness combinations.

#### Characteristic:

- \* High temperature stability
- \* Low thermal conductivity
- \* Low heat storage
- \* Lightweight
- \* Resiliency
- \* High heat reflectance
- \* Good dielectric strength
- \* Excellent corrosion resistance
- \* Thermal shock resistance
- \* Flexibility in use
- \* Easy to wrap, shape and cut

#### Application:

- \* Wrapping for hot tooling and mould
- \* Insulating back up lining
- \* Flexible gasket and seals
- \* Insulation for Domestic Appliance

|                                             | 1260 Paper<br>1260 纸      | 550 Paper<br>550纸         | 1430 Paper<br>1430纸       | 880 Paper<br>880纸         |
|---------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Temperature Grade <sup>0</sup> C 分类温度       | 1260                      | 1260                      | 1430                      | 1430                      |
| Melting Point <sup>0</sup> C 熔点             | 1760                      | 1760                      | 1760                      | 1760                      |
| Color 颜色                                    | Light Gray 灰白             | White 白                   | White 白                   | White 白                   |
| Operating temperature <sup>0</sup> C 推荐使用温度 | 1000                      | 1050                      | 1100                      | 1150                      |
| Permanent liner shrinkage% 加热线收缩            | 1000 <sup>0</sup> C*24h<3 | 1050 <sup>0</sup> C*24h<3 | 1100 <sup>0</sup> C*24h<3 | 1150 <sup>0</sup> C*24h<3 |
| Available Density (kg/ m3) 密度               | 192,200                   | 192,200                   | 192,200                   | 192,200                   |
| Available thickness (mm) 厚度                 | 1,2,3,4,5,6               | 1,2,3,4,5,6               | 1,2,3,4,5,6               | 1,2,3,4,5,6               |
| Width*Length                                | 80m, 40m, 30m, 20m        |                           |                           |                           |



# 真空成型异型件 Special Vacuum Shaped Ceramic Fiber

Union Fortune special vacuum shaped ceramic fiber are made from our selected ceramic fiber bulk, formed by vacuum technology is serving as superior high temperature resistant. Our special vacuum shaped ceramic fiber is designed according to different products and different production selection.

集富真空成型异型件采用特选的陶瓷纤维，用真空成型技术成型，具有极好的隔热效果。真空成型异型件为不同的产品及不同的生产线设计。

#### 产品特性:

- × 反热率高
- × 收缩率低
- × 重量轻
- × 良好的抗拉强度，优异的抗热冲击性能
- × 优异的吸音性能

#### 产品应用:

- × 高温炉的孔
- × 高温炉的门
- × 灌液罐
- × 高温炉的阻
- × 工业及工程用的保温物品

#### Characteristic:

- \* High temperature Resistant,
- \* Low shrinkage
- \* Light weight
- \* Impact resistant
- \* Sound absorption

#### Application:

- \* watch-fire hole and thermometer checking hole in industrial kiln
- \* Kiln door of high temperature furnace
- \* Liquid loading tank
- \* Quarl block in industrial kiln
- \* heat proof material of both civil and industrial equipment

| Item 项目                                                        | Standard 标准                          | High Pure 高纯 | High Alumina 高氧化铝 | Zirconium 高锆 |
|----------------------------------------------------------------|--------------------------------------|--------------|-------------------|--------------|
| Classification Temp(°C) 分类温度                                   | 1260                                 | 1260         | 1360              | 1430         |
| Working Temp(°C) 推荐使用温度                                        | 1050                                 | 1100         | 1200              | 1350         |
| Color 颜色                                                       | pure white白色                         | pure white白色 | pure white白色      | pure white白色 |
| Density(kg/m3) 密度                                              | 220-360                              | 220-360      | 220-360           | 220-360      |
| Permanent linear shrinkage 永久直线收缩(%)<br>(after 24h , 320kg/m3) | -3                                   | -3           | -3                | -3           |
|                                                                | ( 1050°C )                           | ( 1100°C )   | ( 1200°C )        | ( 1350°C )   |
| Thermal Conductivity 热量传导性<br>(w/m.k),285kg/m3(°C)             | 0.085                                | 0.085        | 0.085             | 0.085        |
|                                                                | (400)                                | (400)        | (400)             | (400)        |
|                                                                | 0.132                                | 0.132        | 0.132             | 0.132        |
|                                                                | (800)                                | (800)        | (800)             | (800)        |
|                                                                | 0.18                                 | 0.18         | 0.18              | 0.18         |
|                                                                | (1000)                               | (1000)       | (1000)            | (1000)       |
| Compress Strength 压缩强度，≥MPa                                    | 0.5                                  | 0.5          | 0.5               | 0.5          |
| Dimension 尺寸                                                   | Based on customers requirement 按客户要求 |              |                   |              |

# 特殊制品 Special Products

## 陶瓷纤维纺织制品

### Ceramic Fiber Textile

纽绳，套管，纤维布，盘根等

Rope, Tube, Textile...etc



## 特殊制品

### Special Products

硬质耐火材料、重质浇注料、纤维浇注料，轻质耐火砖、硅钙板、湿毡等

Hard Refractory Materials, Heavy Injection Materials, Ceramic Fiber Injection Materials, Light Refractory Materials, Silicate Board, Moist Felt...etc.



## 其他代理产品

### Other Products

可溶解于人体肺液的绿色环保型纤维、各种优质的高性能陶瓷纤维制品和胶泥

Soluble Ceramic Fiber, High Quality Ceramic Fiber Products and Glue.



# 应用行业 Industrial Application



钢铁 Steel



废气燃烧  
Regenerative Thermal Oxidizer



陶瓷行业 Cermet Industrial



有色金属 Color Metal —  
铝 Aluminum



船舶 Shipyard



家用电器 Electrical Appliances

# 工程案例 Projects

