



Refractory Solutions For High-Temperature Industries

Professional / Effective / Reliable



Iron & Steel



Non-ferrous



Glass



Cement & Lime

Zhengzhou Kerui (Group) Refractory Co., Ltd.

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Welcome to Kerui

Expert of Refractory Solutions

Founded in 2004, Kerui Refractory is an international high-tech enterprise integrating R&D and innovation, manufacturing, solutions and service of high-performance refractory products.

Kerui attached great importance on R&D. In the past decades, we've obtained one invention patent certificate and more than 20 utility model patent certificates. Kerui insists on technological innovation to provide customers with better products.

KERUI main products include refractory bricks, insulating bricks, ceramic fiber products, unshaped refractory materials, etc. All the products are widely applied in high-temperature industries worldwide, such as iron-steel, aluminum, power, glass, boiler, non-ferrous, cement industry, etc., contributing to the development of global high-temperature industry.



Kerui Production View

Serving the Global High-temperature Industry

Raw Material Workshop

It covers an area of more than 3,000 square meters. There are complete categories and sufficient reserves to ensure the supply of raw materials required for stable production.



Batching Workshop

There is a fully automatic batching system. Through coarse, medium and fine crusher screening equipment, as well as powerful mixing equipment, the computer automatically controls the batching. Therefore, the uniformity and stability of the product is fundamentally ensured.



Forming Workshop

There are 20 sets of new CNC presses of 400-1000 tons. These machines have strong power and accurate dimensions, which can effectively improve the strength of products and ensure stable quality. Kerui adopts steel molds and special-shaped bricks can be customized in multiple sizes.



Kerui Production View

Serving the Global High-temperature Industry

Sintering Workshop

Kerui has possessed two 168 meter tunnel kilns, two high-temperature shuttle kilns, etc., which can ensure the annual production capacity of 150000t. We also have strong customization ability. The special-shaped and customized products have met different customers' requirement and won unanimous praise from customers.



Warehousing Workshop

After the finished product passes the quality inspection, it can be stored in the warehouse after being bundled and packaged with wooden pallets, three-layer plastic film, and steel straps. Kerui has a 5,000-square-meter modern warehousing workshop. This workshop integrates warehousing, packaging and shipping. It ensures the products to be delivered on schedule.



Digital Management

Kerui adopts a digital production centralized control center to strictly control the production process. From the selection and proportion of raw materials selection to the molding and sintering of refractory materials, Kerui has established a complete corporate product quality traceability system and production management system.



Kerui Certificates

Qualified by Certificates

Kerui Refractory has a number of international certifications, also have many domestic certificates, the quality is very guaranteed, and they have been unanimously recognized by customers at home and abroad.



Kerui R&D Center

Always Conducts Strict Quality Control

Focus on refractory industry for 20 years, Kerui Refractory stands out because of superior refractory products. Kerui established engineering technology center and professional physical and chemical analysis laboratory to control the quality.



Kerui Partners

All Over The World

KERUI has become the first choice of worldwide customers across 5 continents, including Asia, Europe, America, Africa, Oceania.

We serve the high-temperature industries all over the world, including iron and steel, aluminum, glass, cement, etc. We have a team of highly qualified and experienced application engineers, providing the " **TOTAL REFRACTORY SOLUTIONS** " to customers.





Refractory Bricks

Serving the Global High-temperature Industry

High Alumina Brick



High Working
Temperature



Good Thermal
Stability



Strong Slag
Resistance



Good Erosion and
Corrosion Resistance

Application:

High alumina brick is used for lining steel-making electric furnaces, glass melting furnaces, and cement rotary furnaces.

Technical Data:

| Item | | LZ-80 | LZ-75 | LZ-70 | LZ-65 | LZ-60 | LZ-55 | LZ-48 |
|--------------------------------------|---|-----------------------|-------|-----------------------|-------|-------|-------|-------|
| Al ₂ O ₃ , % | ≥ | 80 | 75 | 70 | 65 | 60 | 55 | 48 |
| Apparent Porosity, % | ≤ | 21 | 24 | 24 | 24 | 26 | 22 | 22 |
| Cold Crushing Strength, MPa | ≥ | 70 | 60 | 55 | 50 | 45 | 45 | 40 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1530 | 1520 | 1510 | 1500 | 1430 | 1450 | 1420 |
| Permanent Linear Change, % | | 1500°C*2h -0.4~0.2 | | 1450°C*2h -0.4~0.1 | | | | |



High Working
Temperature



Proper Thermal
Stability



Proper Acid
Resistance



Good Thermal
Shock Resistance

Application:

Clay bricks are divided by use and are mainly divided into clay refractory bricks for blast furnaces, clay refractory bricks for hot blast furnaces, and large clay refractory bricks for coke ovens and glass kilns.

Technical Data:

| Item | | PN-42 | PN-40 | PN-35 | PN-30 |
|--------------------------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Al ₂ O ₃ , % | ≥ | 42 | 40 | 35 | 30 |
| Fe ₂ O ₃ , % | ≤ | 2.0 | / | / | / |
| Apparent Porosity, % | ≤ | 20 | 24 | 26 | 23 |
| Cold Crushing Strength, MPa | ≥ | 45 | 35 | 30 | 30 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1400 | 1350 | 1320 | 1300 |
| Permanent Linear Change, % | | 1400°C*2h -0.4~0.1 | 1350°C*2h -0.4~0.1 | 1300°C*2h -0.4~0.1 | 1300°C*2h -0.4~0.1 |



High Working
Temperature



Good Thermal
Stability



High Cold
Crushing Strength



Strong Resistance on
Chemical Corrosion

Application:

Corundum brick is mainly used in iron-making blast furnaces and hot blast furnaces, steel-making furnace external refining furnaces, sliding water heaters, glass melting furnaces and petrochemical industrial furnaces.

Technical Data:

| Item | | GYZ-99 | GYZ-90 | GYZ-80 |
|-------------------------------------|---|--------|--------|--------|
| Al ₂ O ₃ , % | ≥ | 99 | 90 | 80 |
| SiO ₂ , % | ≤ | 0.2 | 8 | 18 |
| Fe ₂ O ₃ , % | ≤ | 0.2 | 0.2 | 0.3 |
| Bulk Density, g/cm ³ | ≥ | 3.2 | 3 | 2.8 |
| Apparent Porosity, % | ≤ | 19 | 18 | 18 |
| Cold Crushing Strength, MPa | ≥ | 100 | 100 | 100 |
| 0.2MPa Refractoriness Underload, °C | ≥ | 1700 | 1700 | 1700 |

Mullite Brick



High Working
Temperature



Excellent Thermal
Shock Resistance



Great Wear
Resistance



Good Erosion and
Corrosion Resistance

Application:

Mullite brick is mainly used in hot blast furnace tops, blast furnace shafts and bottoms, glass melting furnace regenerators, ceramic sintering kilns, dead-end furnace linings in petroleum cracking systems, etc.

Technical Data:

| Item | | MLS-75 | MLS-70 |
|--------------------------------------|---|--------|--------|
| Al ₂ O ₃ , % | ≥ | 75 | 70 |
| SiO ₂ , % | ≤ | 23 | 25 |
| Fe ₂ O ₃ , % | ≤ | 0.4 | 0.4 |
| Bulk Density, g/cm ³ | ≥ | 2.7 | 2.6 |
| Apparent Porosity, % | ≤ | 18 | 18 |
| Cold Crushing Strength, MPa | ≥ | 100 | 100 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1680 | 1680 |

Sillimanite Brick



High Working
Temperature



Good Thermal
Stability



Great Wear
Resistance



Excellent Thermal
Shock Resistance

Application:

Sillimanite refractory materials are widely used in glass kilns, blast furnaces, ceramics, etc. in metallurgy, chemical industry, building materials and other industries.

Technical Data:

| Item | | GXS-65 | GXS-60 |
|-------------------------------------|---|--------|--------|
| Al ₂ O ₃ , % | ≥ | 65 | 60 |
| SiO ₂ , % | ≤ | 32 | 37 |
| Fe ₂ O ₃ , % | ≤ | 0.5 | 1 |
| Bulk Density, g/cm ³ | ≥ | 2.5 | 2.3 |
| Apparent Porosity, % | ≤ | 18 | 19 |
| Cold Crushing Strength, Mpa | ≥ | 80 | 80 |
| 0.2MPa Refractoriness Underload, °C | ≥ | 1650 | 1600 |

Chrome Corundum Brick



High Working
Temperature



Good Thermal
Shock Resistance



Great Wear
Resistance



Good Erosion and
Corrosion Resistance

Application:

Chrome corundum brick can be used as glass kiln lining, brushed glass flow hole cover brick and used in molten iron pretreatment device, garbage incinerator, coal water slurry pressurized gasification furnace backing, etc.

Technical Data:

| Item/Grade | | GGZ-30 | GGZ-20 | GGZ-12 | GGZ-5 |
|------------------------------------|---|--------|--------|--------|-------|
| Cr ₂ O ₃ , % | ≥ | 30 | 20 | 12 | 5 |
| Fe ₂ O ₃ , % | ≤ | 0.3 | 0.3 | 0.3 | 0.3 |
| Al ₂ O ₃ , % | ≥ | 68 | 76 | 80 | 85 |
| Apparent Porosity, % | ≤ | 18 | 18 | 18 | 18 |
| Bulk Density, g/cm ³ | ≥ | 3.5 | 3.4 | 3.2 | 3.1 |
| Cold Crushing Strength,MPa | ≥ | 100 | 100 | 100 | 100 |



High Working Temperature



Good Thermal Shock Resistance



Great Wear Resistance



Excellent Erosion and Corrosion Resistance

Application:

AZS brick is used as refractory materials for high temperature and erosion resistant kilns such as glass industrial pool kilns, glass electric kilns, slides in the steel industry, and kilns in the soda ash industry.

Technical Data:

| Item | KR-AZS41 | KR-AZS36 | KR-AZS33 |
|--|---------------|---------------|---------------|
| SiO ₂ , % | 12 | 13 | 15 |
| Al ₂ O ₃ , % | The Remainder | The Remainder | The Remainder |
| ZrO ₂ , % | 41 | 36.5 | 33.5 |
| Fe ₂ O ₃ +TiO ₂ +CaO+MgO+Na ₂ O+K ₂ O, % | ≤2.0 | ≤2.0 | ≤2.0 |
| Bulk Density, g/cm ³ | 4.05 | 3.9 | 3.8 |
| Apparent Porosity, % | 0.6 | 0.8 | 0.7 |
| Initial Precipitation Temperature of Vitreous Phase, °C | 1400 | 1400 | 1400 |
| Vitreous Phase Exudation, % (1500°C×4h) | 1.5 | 2.3 | 2.0 |
| Anti-molten Glass Erosion Speed Under Static Condition , mm/24h (1500°C × 36h, ordinary soda lime glass) | 1.2 | 1.3 | 1.4 |
| Bubble Release Rate, % (1300°C X 10h, ordinary soda lime glass) | 0.6 | 1.0 | 1.2 |

Andalusite Brick



High Working
Temperature



Good Thermal
Shock Resistance



Good Thermal
Stability



Good Erosion and
Corrosion Resistance

Application:

Andalusite bricks with excellent performance can fully meet the requirements for use in different parts of blast furnaces and hot blast stoves and in different working environments.

Technical Data:

| Item | | RH-155 | RH-150 | RH-145 | RH-140 | RH-135 | RH-130 |
|--------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Al ₂ O ₃ , % | ≥ | 69 | 65 | 61 | 57 | 53 | 49 |
| Fe ₂ O ₃ , % | ≤ | 1 | 1 | 1.2 | 1.2 | 1.5 | 1.5 |
| TiO ₂ , % | ≤ | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 |
| Apparent Porosity, % | ≤ | 20 | 20 | 20 | 20 | 20 | 20 |
| Bulk Density, g/cm ³ | | 2.55~2.70 | 2.50~2.65 | 2.45~2.60 | 2.40~2.55 | 2.35~2.50 | 2.30~2.45 |
| Cold Crushing Strength, MPa | | 55 | 55 | 50 | 50 | 40 | 40 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1700 | 1700 | 1650 | 1600 | 1520 | 1450 |
| Permanent Line Change, % | | 1500°C×2h | | | 1450°C×2h | | |

Magnesia Brick



High Working
Temperature



Strong Resistance
to Alkaline Slag



High Thermal
Conductivity



High Softening
Temperature Under Load

Application:

Magnesia brick is mainly used in alkaline open-hearth furnaces, electric furnace bottoms and furnace walls for steelmaking.

Technical Data:

| Item | | M-98 | M-97A | M-97B | M-95 | M-91 |
|--------------------------------------|---|---------------------|---------------------|-------|---------------------|---------------------|
| MgO, % | ≥ | 97.5 | 97.0 | 96.5 | 95.0 | 91.0 |
| SiO ₂ , % | ≤ | 1.00 | 1.20 | 1.50 | 2.00 | / |
| CaO, % | ≤ | / | / | / | 2.00 | 3.00 |
| Apparent Porosity, % | ≤ | 16 | 16 | 18 | 16 | 18 |
| Bulk Density, g/cm ³ | ≥ | 3.00 | 3.00 | | 2.95 | 2.90 |
| Cold Crushing Strength, MPa | ≥ | 60 | 60 | | 60 | 60 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1700 | 1700 | | 1650 | 1560 |
| Permanent Linear Change, % | | 1650°C*2h -0.2-0 | 1650°C*2h -0.2-0 | | 1600°C*2h -0.3-0 | 1600°C*2h -0.5-0 |

Magnesia Chrome Brick



High Working
Temperature



High Temperature
Strength



Strong Resistance to Alkaline
Slag Corrosion to Alkali Erosion



Excellent Thermal
Stability

Application:

Magnesia chrome brick is mainly used in the metallurgical industry, such as constructing open-hearth furnace tops, electric furnace tops, external refining furnaces and various alkali-resistant non-ferrous metal smelting furnaces.

Technical Data:

| Item | | MGe-16A | MGe-16B | MGe-12A | MGe-12B | MGe-8A | MGe-8B |
|--------------------------------------|---|---------|---------|---------|---------|--------|--------|
| MgO ,% | ≥ | 50 | 45 | 60 | 55 | 65 | 60 |
| Cr ₂ O ₃ ,% | ≥ | 16 | 16 | 12 | 12 | 8 | 8 |
| Apparent Porosity ,% | ≤ | 19 | 22 | 19 | 21 | 19 | 21 |
| Cold Crushing Strength, MPa | ≥ | 35 | 25 | 35 | 30 | 35 | 30 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1650 | 1550 | 1650 | 1550 | 1650 | 1530 |

Magnesia Carbon Brick



High Working
Temperature



Good Thermal
Shock Resistance



Strong Slag
Resistance



Low Creep Rate in
High Temperature

Application:

Magnesia carbon bricks are mainly used in the lining of converters, AC electric arc furnaces, DC electric arc furnaces, and slag lines of ladles in the steelmaking industry.

Technical Data:

| Item | | MT-8A | MT-8B | MT-10A | MT-10B | MT-12A | MT-12B | MT-14A | MT-14B | MT-16A | MT-16B | MT-18A | MT-18B |
|---------------------------------|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MgO, % | ≥ | 82 | 81 | 80 | 79 | 78 | 77 | 76 | 74 | 74 | 72 | 72 | 70 |
| C, % | ≥ | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 |
| Apparent Porosity, % | ≤ | 4.5 | 5.0 | 4.0 | 4.5 | 4.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.0 | 3.5 |
| Bulk Density, g/cm ³ | ≥ | 3.05 | 3.00 | 3.02 | 2.97 | 2.97 | 2.94 | 2.95 | 2.90 | 2.92 | 2.87 | 2.89 | 2.84 |
| Cold Crushing Strength, MPa | ≥ | 45 | 45 | 40 | 40 | 40 | 35 | 38 | 35 | 35 | 35 | 35 | 30 |

Magnesia Alumina Spinel Brick



Good Thermal Stability



Strong Resistance to Erosion



Lower Thermal Conductivity



Good Resistance to Peeling

Applications:

Mainly used in non-ferrous metal smelting furnaces, such as steel nickel furnaces and aluminum smelting furnace linings, electric furnace covers, steel drum linings, steel refining vacuum treatment equipment linings, high-temperature belt linings in cement calcination kilns, steel storage chambers in open hearth furnaces, and lattice bricks in glass furnace heating chambers.

Technical Data:

| Item | | Index |
|---|---|-------|
| MgO ,% | ≥ | 80 |
| Al ₂ O ₃ ,% | ≥ | 10 |
| Apparent Porosity ,% | ≤ | 17 |
| Bulk Density ,g/cm ³ | ≥ | 2.9 |
| Cold Crushing Strength ,Mpa | ≥ | 50 |
| High-temperature Bending Strength (1350°C*0.5h), MPa | ≥ | 3.5 |
| Thermal Shock Resistances (1100°C , Water Cooling), Cycle | ≥ | 12 |

Magnesia Iron Spinel Brick



High Working Temperature



Good Thermal Shock Resistance



High Compressive Strength



Strong Resistance to Erosion and Permeability

Application:

Magnesia iron spinel brick is an ideal chromium free alkaline refractory material for cement rotary kiln firing.

Technical Data:

| Item | | MFe-85A | MFe-85B |
|--------------------------------------|---|---------|---------|
| MgO ,% | ≥ | 85 | 85 |
| Al ₂ O ₃ ,% | ≥ | 3-5 | 3-5 |
| Fe ₂ O ₃ ,% | ≥ | 4-6 | 4-6 |
| Bulk Density ,g/cm ³ | ≥ | 2.95 | 2.90 |
| Cold Crushing Strength ,Mpa | ≥ | 55 | 50 |
| 0.2MPa Refractoriness Under Load ,°C | ≥ | 1650 | 1600 |



High Working
Temperature



Good Thermal
Stability



Good Resistance to
Acid Slag Corrosion



High Refractoriness
Under Load

Application:

Silica brick is mainly used as structural materials for coke ovens, glass furnaces, acid steelmaking furnaces and other thermal equipment.

Technical Data:

| Item/Grade | | GZ-94 | GZ-95 | GZ-96 |
|--------------------------------------|---|-------|-------|-------|
| SiO ₂ , % | ≥ | 94 | 95 | 96 |
| Fe ₂ O ₃ , % | ≤ | 1.4 | 1.2 | 1.0 |
| Apparent Porosity, % | ≤ | 22 | 22 | 22 |
| Bulk Density, g/cm ³ | ≤ | 2.35 | 2.35 | 2.34 |
| Cold Crushing Strength, MPa | ≥ | 30 | 35 | 40 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1650 | 1660 | 1670 |

Silicon Carbide Brick



Good Thermal
Shock Stability



High Working
Temperature



Great Wear
Resistance



Low Thermal
Expansion Coefficient

Application:

Silicon carbide brick is mainly used for making non-ferrous metallurgical retorts, aluminum casting molds, electric furnace linings, aluminum electrolytic cell linings, ceramic kiln furniture and heat exchangers, etc.

Technical Data:

| Item/Grade | | Index |
|--------------------------------------|---|-------|
| SiC, % | ≥ | 85 |
| Fe ₂ O ₃ , % | ≤ | 0.5 |
| Apparent Porosity, % | ≤ | 16 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1750 |
| Bulk Density, g/cm ³ | ≥ | 2.6 |
| Cold Crushing Strength, MPa | ≥ | 80 |
| Modulus of Rupture, MPa | ≥ | 40 |

Chromic Oxide Brick



High Working
Temperature



Good Thermal
Shock Resistance



Great Wear
Resistance



Good Corrosion
Resistance

Application:

High chromium bricks are mainly used for lining and reinforcement of different blast furnaces, kilns, electric furnaces, boilers, etc. in the metallurgical industry, cement industry, chemical industry, non-ferrous metal and glass industries.

Technical Data:

| Item | | GGZ-75 | GGZ-85 | GGZ-90 | GGZ-95 |
|--|---|--------|--------|--------|--------|
| Cr ₂ O ₃ , % | ≥ | 75 | 85 | 90 | 95 |
| Cr ₂ O ₃ +Al ₂ O ₃ +ZrO ₂ , % | ≥ | 98 | 98 | 98 | 98 |
| SiO ₂ , % | ≤ | 0.2 | 0.2 | 0.2 | 0.2 |
| Fe ₂ O ₃ , % | ≥ | 0.3 | 0.3 | 0.3 | 0.3 |
| K ₂ O+Na ₂ O, % | ≥ | 0.2 | 0.2 | 0.2 | 0.2 |
| Bulk Density, g/cm ³ | ≥ | 3.9 | 4.2 | 4.22 | 4.25 |
| Apparent Porosity, % | ≤ | 18 | 18 | 16 | 16 |
| Cold Crushing Strength, MPa | ≥ | 120 | 120 | 120 | 120 |

Alumina Silicon Carbide Brick



High Working
Temperature



Good Thermal
Shock Resistance



Great Wear
Resistance



High Temperature
Compressive Strength

Application:

Alumina silicon carbide brick can be used as the supporting material for the lining of wire quenching heating furnace and the corundum silicon carbide slide rail brick for steel rolling heating furnace. It can also be used as kiln furniture for ceramic firing.

Technical Data:

| Item | | Gm1650 | Gm1600 | Gm1550 |
|--|---|--------|--------|--------|
| Al ₂ O ₃ , % | ≥ | 65 | 63 | 60 |
| Bulk Density, g/cm ³ | ≥ | 2.65 | 2.60 | 2.55 |
| Apparent Porosity, % | ≤ | 17 | 17 | 19 |
| Cold Crushing Strength, MPa | ≥ | 85 | 90 | 90 |
| 0.2MPa Refractoriness Under Load, °C | ≥ | 1650 | 1600 | 1550 |
| Thermal Shock Resistances (1100°C, Water Cooling), Cycle | ≥ | 10 | 10 | 12 |
| Resistance to Abrasion at Ambient Temperature, cm ³ | ≤ | 5 | 5 | 5 |

Silicon Nitride Bonded Silicon Carbide Brick



High Working
Temperature



Good Thermal
Shock Resistance



Great Wear
Resistance



Good Alkali
Corrosion Resistance

Application:

Silicon nitride bonded silicon carbide brick is mainly used as the lining of the lower furnace body of the blast furnace, the lining of the aluminum reduction electrolytic cell, ceramic kiln furniture, and the blast furnace tuyere water cooling pipe sleeve.

Technical Data:

| Item | | Index |
|------------------------------------|---|-------|
| SiC, % | ≥ | 72 |
| Si ₃ N ₄ , % | ≥ | 21 |
| Fe ₂ O ₃ , % | ≤ | 0.5 |
| Apparent Porosity, % | ≤ | 18 |
| Bulk Density, g/cm ³ | ≥ | 2.65 |
| Cold Crushing Strength, MPa | ≥ | 150 |
| Modulus of Rupture, MPa | ≥ | 40 |

Refractory Balls



High Fire
Resistance



Customized
Production Available



Great Wear
Resistance



Good Alkali
Corrosion Resistance

Application:

According to the material, there are high alumina refractory balls, corundum refractory balls, silica refractory balls, magnesium refractory balls, mullite refractory balls, etc. Refractory balls can be used in high temperature conversion furnaces, conversion furnaces, hot air furnaces of fertilizer plants, etc.

Technical Data:

| Item | High Alumina | Low Creep | Mullite | Corundum |
|---|--------------|-----------|---------|----------|
| Al ₂ O ₃ , % | 65 | 70 | 75 | 95 |
| Refractoriness under load, °C | 1450 | 1460 | 1530 | 1650 |
| Apparent Porosity, % | 25 | 23 | 22 | 18 |
| Bulk Density, g/cm ³ | 2.3 | 2.4 | 2.5 | 3.1 |
| Cold crushing strength, Mpa | 13 | 14 | 32 | 36 |
| Thermal shock resistance (1100°C water cooling), cycle ≥ | ≥15 | ≥10 | ≥20 | ≥7 |
| Refractoriness, °C | 1710 | 1750 | 1800 | 1800 |



Insulation Brick

Serving the Global High-temperature Industry

High Alumina Insulation Brick



Low Volume
Density



Lower Thermal
Conductivity



Excellent Heat
Insulation



Significant Energy
Saving Effect

Application:

Used in insulation layer of industrial kilns like ceramic tunnel kilns, roller kilns, shuttle kilns, wall kilns, as well as other locations without strong erosion of high-temperature molten materials.

Technical Data:

| Item/Grade | | Lg140 -1.2 | Lg140 -1.0 | Lg140 -0.8L |
|---|-----------------------|------------|------------|-------------|
| Al ₂ O ₃ , % | ≥ | 48 | | |
| Fe ₂ O ₃ , % | ≤ | 2.0 | | |
| Bulk Density, g/cm ³ | ≤ | 1.2 | 1 | 0.8 |
| Cold Crushing Strength, MPa | ≥ | 4.5 | 3.5 | 2.5 |
| Permanent Linear Change, % (T/°C*12h) | Test Temperature T/°C | 1400 | | |
| Thermal Conductivity Coefficient, W/(m·K) Average Temperature (350±25°C) | ≤ | 0.55 | 0.50 | 0.35 |

Fire Clay Insulation Brick



Lower Thermal
Conductivity



High Porosity,
Low Volume Density



Good Thermal
Shock Resistance



Good Heat
Insulating Effect

Application:

Widely used as the insulation layer of thermal equipment such as ignition kilns, flues, refining devices, heating devices, gas furnaces and pipelines, soaking furnaces, annealing furnaces, reaction chambers, etc.

Technical Data:

| Item/Grade | | NG135 -1.3 | NG135 -1.2 | NG130 -1.0 | NG125 -0.8 | NG120 -0.6 |
|---|----------------------------|---------------|---------------|----------------|----------------|----------------|
| Bulk Density, g/cm ³ | ≥ | 1.3 | 1.2 | 1.0 | 0.8 | 0.6 |
| Cold Crushing Strength, MPa | ≤ | 5 | 4.5 | 3.5 | 2.5 | 1.3 |
| | / | 4.5 | 4.0 | 3.0 | 2.0 | 1.0 |
| Permanent Linear Change, % | Experimental Conditions | 1350°C*12h | | 1300°C* 12h | 1250°C* 12h | 1200°C* 12h |
| | Xmin~Xmax | -2-1 | | | | |
| Thermal Conductivity Coefficient , W/(m·K) ≤ Average Temperature (350±25°C) | ≤ | 0.55 | 0.50 | 0.40 | 0.35 | 0.25 |

Mullite Insulation Brick



Lightweight and
High Strength



Good Thermal
Insulation Effect



Accurate and
Customized Dimension



Lower Thermal
Conductivity



Good Thermal
Shock Resistance

Application:

Suitable for the refractory lining and backing insulation layer of pyrolysis furnaces, hot blast furnaces, ceramic roller kilns, electric porcelain drawer kilns and various industrial resistance furnaces.

Technical Data:

| Item/Grade | | KR-23 | | | |
|---------------------------------------|---|-------------|-------------|-------------|-------------|
| Type | | A | B | C | D |
| Al ₂ O ₃ , % | ≥ | 42 | 42 | 45 | 48 |
| Fe ₂ O ₃ , % | ≤ | 1.2 | 1.2 | 1 | 1 |
| Bulk Density, g/cm ³ | | 0.55 | 0.6 | 0.8 | 1.0 |
| Reheating Linear Change, % | ≤ | -0.5 | -0.55 | -0.4 | -0.3 |
| | | 1230°C x12h | 1260°C x12h | 1300°C x12h | 1300°C x12h |
| Cold Compression Strength, MPa | ≥ | 1.2 | 1.5 | 2.3 | 3 |
| Thermal conductivity 350 °C , W/(m·K) | | 0.17 | 0.19 | 0.24 | 0.31 |

Mullite Insulation Brick



| Item/Grade | | KR-26 | | | |
|---------------------------------------|---|-------------|-------|------|------|
| Type | | A | B | C | D |
| Al ₂ O ₃ , % | ≥ | 54 | 55 | 56 | 56 |
| Fe ₂ O ₃ , % | ≤ | 0.9 | 0.9 | 1 | 1 |
| Bulk Density, g/cm ³ | | 0.7 | 0.8 | 0.9 | 1.0 |
| Reheating Linear Change, % | ≤ | -1 | -0.65 | -0.5 | -0.5 |
| | | 1400°C x12h | | | |
| Cold Compression Strength, MPa | ≥ | 2 | 2.3 | 2.8 | 3.2 |
| Thermal conductivity 350 °C , W/(m·K) | | 0.21 | 0.25 | 0.3 | 0.32 |

| Item/Grade | | KR-28 | | | KR-30 | |
|---------------------------------------|---|-------------|------|------|-------------|------|
| Type | | A | B | C | A | B |
| Al ₂ O ₃ , % | ≥ | 64 | 65 | 66 | 72 | 72 |
| Fe ₂ O ₃ , % | ≤ | 0.75 | 0.65 | 0.65 | 0.55 | 0.55 |
| Bulk Density, g/cm ³ | | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 |
| Reheating Linear Change, % | ≤ | -1 | -0.8 | -0.7 | -0.9 | -0.7 |
| | | 1500°C x12h | | | 1600°C x12h | |
| Cold Compression Strength, MPa | ≥ | 2.3 | 2.8 | 3.3 | 3.0 | 3.5 |
| Thermal conductivity 350 °C , W/(m·K) | | 0.28 | 0.32 | 0.34 | 0.4 | 0.43 |

Alumina Bubble Brick



High Crushing
Strength



High Working
Temperature



Good Thermal
Shock Resistance



Good Thermal
Stability



Lightweight and
Energy-saving



Lower Thermal
Conductivity

Application:

Commonly used as the working layer and heat insulation layer of high temperature kilns in petrochemical industry gasifiers, carbon black reactors, metallurgical induction furnaces and other industries.

Technical Data:

| Item/Grade | | 85 | 90 | 99 |
|--|---|---------|---------|---------|
| Max Service Temperature, °C | | 1680 | 1700 | 1800 |
| Al ₂ O ₃ , % | ≥ | 85 | 90 | 99 |
| SiO ₂ , % | ≤ | 13 | 8 | 0.2 |
| Fe ₂ O ₃ , % | ≤ | 0.2 | 0.2 | 0.2 |
| Bulk Density, g/cm ³ | | 1.4-1.7 | 1.4-1.7 | 1.4-1.7 |
| Cold Crushing Strength, Mpa | ≥ | 12 | 10 | 9 |
| Refractoriness Under Load(0.1MPa.0.6%), °C | ≥ | 1650 | 1700 | 1700 |
| Reheating Linear Change(1600°Cx3h), % | | ±0.3 | ±0.3 | ±0.3 |
| Thermal Expansion Coefficient (Room temp-1300°C) | | ~7.8 | ~8.0 | ~8.6 |
| Thermal Conductivity Coefficient (1800°C), W/(m·K) | ≤ | 0.8 | 1.3 | 1.5 |

Silica Insulation Brick



Great Thermal
Mechanical Strength



Strong Acid Slag
Erosion Resistance



Good Thermal
Stability



Lower Thermal
Conductivity



Lightweight and
Energy-saving

Application:

Commonly used in coke oven insulation layers, glass kiln vaults, hot blast furnace walls and domes. It does not directly contact high-temperature molten materials and alkaline gas working layers.

Technical Data:

| Item/Grade | | GGR-1.00 | GGR-1.10 | GGR-1.15 | GGR-1.20 |
|---|-------------|----------|----------|----------|----------|
| SiO ₂ , % | ≥ | 91 | 91 | 91 | 91 |
| Bulk Density, g/cm ³ | ≥ | 1.00 | 1.10 | 1.15 | 1.20 |
| Cold Crushing Strength, MPa | ≥ | 2.0 | 3.0 | 5.0 | 5.0 |
| Permanent Linear Change On Reheating, °C | ≤ | / | / | 0.5 | 0.5 |
| 0.1MPa Refractoriness Underload, °C | ≥1500°C, 2h | 0.5 | 0.5 | / | / |
| | ≥1450°C, 2h | 1400 | 1420 | 1500 | 1520 |
| Thermal Conductivity Coefficient, W/(m·K) Average Temperature (350±10°C) | ≤ | 0.55 | 0.60 | 0.65 | 0.70 |



Monolithic Refractory

Serving the Global High-temperature Industry

Calcium Aluminate Cement



High Heat
Resistance



Environmentally
Friendly



Rapid Hardening



Easy Construction

Application:

In high temperature industries, refractory cement for sale is an important and popular product. Because it has wide applications in manufacturing monolithic refractory products and directly using in kilns.

CA-50 series Technical Data:

| Item | | | A600 | A700 | A900 |
|------------------------------------|----|---|------|------|------|
| SiO ₂ , % | ≤ | | 7.8 | 7.5 | 5.5 |
| Al ₂ O ₃ , % | ≥ | | 50.0 | 51.0 | 53.5 |
| Fe ₂ O ₃ , % | ≤ | | 2.5 | 2.5 | 2.5 |
| R ₂ O, % | ≤ | | 0.4 | 0.4 | 0.4 |
| S, % | ≤ | | 0.1 | 0.1 | 0.1 |
| Cl, % | ≤ | | 0.1 | 0.1 | 0.1 |
| 325M Residue on Sieve, % | ≤ | | 15 | 12 | 8 |
| S, m ² /kg | ≥ | | 300 | 320 | 350 |
| Initial Setting Time, min | ≥ | | 45 | 60 | 90 |
| Final Setting Time, h | ≤ | | 6 | 6 | 6 |
| Flexural Strength, Mpa | 1d | ≥ | 6.0 | 6.5 | 8.0 |
| | 3d | ≥ | 7.0 | 7.5 | 10.0 |
| Compressive Strength, Mpa | 1d | ≥ | 45 | 55 | 72 |
| | 3d | ≥ | 55 | 65 | 82 |

Calcium Aluminate Cement

CA-70 Technical Data:

| Item | CA70 | |
|---|---------------------|-----------|
| Properties Determined according to GB201-2000 | | |
| SiO ₂ , % | ≤0.5 | |
| Al ₂ O ₃ , % | 68.5-70.5 | |
| Fe ₂ O ₃ , % | ≤0.2 | |
| CaO, % | 28.5-30.5 | |
| MgO, % | ≤0.4 | |
| R ₂ O, % | ≤0.4 | |
| Fineness | D50, μm | 11-14 |
| | -45μm, % | ≤8.0 |
| Setting Time, min | Initial Setting, IS | 120-180 |
| | Final Setting, FS | 150-240 |
| Flexural Strength, Mpa | 1d | 7.5-10.0 |
| | 3d | 10.0-12.0 |
| Compressive Strength, Mpa | 1d | 40-50 |
| | 3d | 45-55 |
| Cement Properties in Testing Castables | | |
| Setting Time, min | 20°C | 60-90 |
| | 35°C | 30-50 |
| Vibration Flow, mm (20°C) | Initial Flow | 265-275 |
| | 10min | 255-265 |
| | 30min | 235-245 |
| | 60min | 230-240 |
| Flexural Strength, Mpa | 20°C×24h | 4.5-5.5 |
| | 110°C×24h | 10.0-11.5 |
| | 1100°C×4h | 12.0-14.0 |
| Compressive Strength, Mpa | 20°C×24h | 35-45 |
| | 110°C×24h | 85-95 |
| | 1100°C×4h | 100-120 |
| Linear Change, % | 1100°C×4h | ≤-0.25 |

CA-80 Technical Data:

| Item | CA80 | |
|---|---------------------|-----------|
| Properties Determined according to GB201-2000 | | |
| SiO ₂ , % | ≤0.5 | |
| Al ₂ O ₃ , % | 78.0-81.0 | |
| Fe ₂ O ₃ , % | ≤0.2 | |
| CaO, % | 17.5-20.5 | |
| MgO, % | ≤0.4 | |
| R ₂ O, % | ≤0.4 | |
| Fineness | D50, μm | 5-8 |
| | -45μm, % | ≤5.0 |
| Setting Time, min | Initial Setting, IS | 30-90 |
| | Final Setting, FS | 90-180 |
| Flexural Strength, Mpa | 1d | 5.0-7.5 |
| | 3d | 6.0-8.5 |
| Compressive Strength, Mpa | 1d | 30-40 |
| | 3d | 40-50 |
| Cement Properties in Testing Castables | | |
| Setting Time, min | 20°C | 90-120 |
| | 35°C | 40-60 |
| Vibration Flow, mm (20°C) | Initial Flow | 255-265 |
| | 10min | 250-260 |
| | 30min | 240-250 |
| | 60min | 235-245 |
| Flexural Strength, Mpa | 20°C×24h | 3.0-4.0 |
| | 110°C×24h | 8.0-9.0 |
| | 1100°C×4h | 11.0-13.0 |
| Compressive Strength, Mpa | 20°C×24h | 25-35 |
| | 110°C×24h | 60-70 |
| | 1100°C×4h | 100-120 |
| Linear Change, % | 1100°C×4h | ≤-0.15 |

High Alumina Castable



High-Temperature
Resistance



Impact
Resistance



Excellent Chemical
Resistance



Great Wear
Resistance

Application:

The appearance of high alumina refractory castables is powdery and sandy, which belongs to unshaped refractory materials. It is made of high-alumina raw materials as aggregate, powder, and binder to form a uniform mixture that can be easily molded and installed in various high-temperature applications.

Technical Data:

| Item | | G-15B | G-15 | G-16 |
|--|-------------|-------|------|---------|
| Maximum service temperature, °C | | 1400 | 1500 | 1600 |
| Al ₂ O ₃ , % | | ≥65 | ≥75 | ≥78 |
| SiO ₂ , % | | 25 | 20 | 15 |
| B.D After Drying at 110°C, g/cm ³ | | 2.50 | 2.60 | 2.65 |
| Cold Bending Strength, Mpa | 110°C, X24h | 8 | 8 | 10 |
| | 1100°C, X3h | 8 | 8 | 10 |
| Cold Compressive Strength, Mpa | 110°C, X24h | 70 | 80 | 100 |
| | 1100°C, X3h | 70 | 80 | 100 |
| Linear Change Rate After Burning PLC, % | 1100°C, X3h | ±0.3 | ±0.3 | ±0.3 |
| Construction Reference Water Consumption, % | | 6-7 | 6-7 | 5.5-6.5 |

Corundum Castable



Corrosion
Resistance



High-Pressure
Strength



Good Volume
Stability



Excellent Mechanical
Strength

Application:

Corundum refractory castable is an unshaped refractory material formed by mixing corundum and super bauxite clinker as aggregate and powder, plus some pure calcium aluminate cement, as well as binders and additives.

Technical Data:

| Item | | G-17 | G-18S | G-18 |
|--|-------------|---------|-------|---------|
| Maximum service temperature, °C | | 1650 | 1650 | 1700 |
| Al ₂ O ₃ , % | | ≥85 | ≥90 | ≥93 |
| SiO ₂ , % | | 8 | 4 | 2 |
| B.D After Drying at 110°C, g/cm ³ | | 2.90 | 3.00 | 3.00 |
| Cold Bending Strength, Mpa | 110°C, X24h | 9 | 12 | 14 |
| Cold Compressive Strength, Mpa | 110°C, X24h | 80 | 90 | 100 |
| Linear Change Rate After Burning PLC, % | 1100°C, X3h | ±0.3 | ±0.3 | ±0.2 |
| | 1500°C, X3h | ±0.6 | ±0.6 | ±0.5 |
| Construction Reference Water Consumption, % | | 4.5-5.5 | 5-6 | 5.5-6.5 |

Mullite Castable



Low Thermal
Expansion



Environmentally
Friendly



Short Bake Time,
No cracking



Good Wear
Resistance

Application:

Mullite refractory castable is an unshaped refractory material composed of porous mullite aggregate, binder, and various additives. Mullite is a high-quality refractory raw material, and this type of mineral is relatively rare.

Technical Data:

| Item | | ML-70 | ML-80 | ML-90 |
|--|-------------|-------|-------|-------|
| Maximum service temperature, °C | | 1600 | 1600 | 1750 |
| Al ₂ O ₃ +SiO ₂ , % | | ≥70 | ≥80 | ≥90 |
| B.D After Drying at 110°C, g/cm ³ | | 2.70 | 2.80 | 2.90 |
| Cold Bending Strength, Mpa | 110°C, X24h | 10 | 12 | 15 |
| Cold Compressive Strength, Mpa | 110°C, X24h | 100 | 100 | 150 |
| Linear Change Rate After Burning PLC, % | 1100°C, X3h | ±0.3 | ±0.3 | ±0.3 |
| | 1500°C, X3h | ±0.5 | ±0.5 | ±0.5 |
| Construction Reference Water Consumption, % | | 4.5-5 | 4.5-5 | 4.5-5 |

Silicon Carbide Castable



High-Temperature
Resistance



Good resistance
to erosion



Abrasiveness
resistance



High
strength

Application:

Silicon Carbide Castable are made from high-grade silicon carbide and industrial silicon powder as raw materials. Which is one of the unshaped refractory materials. It is one of the new type refractory material of don't need calcination.

Technical Data:

| Item | | CG-13 | CG-13H | CG-17 |
|--|-------------|---------|---------|-------|
| Maximum service temperature, °C | | 1300 | 1400 | 1600 |
| Al ₂ O ₃ , % | | ≤35 | ≤25 | 75 |
| SiC, % | | ≥30 SiC | ≥50 SiC | / |
| B.D After Drying at 110°C, g/cm ³ | | 2.40 | 2.50 | 2.70 |
| Cold Bending Strength, Mpa | 110°C, X24h | 9 | 8 | 10 |
| | 1100°C, X3h | 9 | 9 | 11 |
| Cold Compressive Strength, Mpa | 110°C, X24h | 80 | 70 | 100 |
| | 1100°C, X3h | 80 | 80 | 110 |
| Linear Change Rate After Burning PLC, % | 1100°C, X3h | ±0.3 | ±0.4 | ±0.4 |
| Construction Reference Water Consumption, % | | 6-7 | 6-7 | 5-6 |



Good thermal shock resistance.



Excellent corrosion resistance.



High-Pressure Strength



Good volume stability.

Application:

Wear resistant castable is a kind of refractory castable that has a high wear resistance and a high abrasion resistance. This product is made of calcium aluminate cement and refractory powder with a high alumina content or other hard materials as the main component.

Technical Data:

| Item | | GQ-75 | GQ-85 | GQ-90 |
|--|-------------|---------|---------|---------|
| Al ₂ O ₃ , % | | 75 | 85 | 90 |
| B.D After Drying at 110°C, g/cm ³ | | 2.75 | 2.90 | 3.00 |
| Cold Bending Strength, Mpa | 110°C, X24h | 11 | 15 | 15 |
| | 1100°C, X3h | 12 | 16 | 17 |
| Cold Compressive Strength, Mpa | 110°C, X24h | 120 | 140 | 150 |
| | 1100°C, X3h | 120 | 120 | 120 |
| Linear Change Rate After Burning PLC, % | 1100°C, X3h | ±0.4 | ±0.3 | ±0.2 |
| Construction Reference Water Consumption, % | | 5.5-6.5 | 4.5-6.5 | 4.5-6.5 |

Lightweight Insulating Castable



Lightweight
easier to handle



Low Thermal
Expansion



Good Thermal
Shock Resistance

Application:

Lightweight thermal insulation castables are composed of refractory lightweight aggregate and powder, as well as binders, additives, etc. s

Technical Data:

| Item | | QG-1.0 | QG-0.8 | QG-0.6 |
|---|-----------|--------|--------|--------|
| Maximum service temperature, °C | | 1250 | 1200 | 1150 |
| Al ₂ O ₃ , % | | 43 | 40 | 36 |
| SiO ₂ , % | | 36 | 37 | 30 |
| Bulk Density, g/cm ³ | | 1.0 | 0.8 | 0.5 |
| Thermal Conductivity Coefficient, W/(m·K) | 350°C | ≤0.3 | ≤0.25 | ≤0.15 |
| | 700°C | ≤0.4 | ≤0.30 | ≤0.20 |
| Cold Crushing Strength, MPa | 110°C*24h | ≥4.0 | ≥2.0 | ≥1.5 |
| | 1000°C*3h | ≥5.5 | ≥2.0 | ≥1.5 |
| Permanent Linear Change (1000°C*3h)/% | | -1.0 | -1.0 | -1.5 |

Ceramic Fiber Products

Serving the Global High-temperature Industry



Ceramic Fiber Blanket



High-Temperature
Stability



Excellent Thermal
Insulation Properties



Free of Binders and
Corrosive Substances



Excellent Sound
Absorption

Application:

The ceramic fiber blanket is white in color, regular in size, integrated with heat insulation, and heat preservation functions, and does not contain any additives.

Technical Data:

| Item | Common Type | Standard Type | High Purity Type | High Alumina Type | Zirconium Containing Type |
|---|---|-------------------------------|--|--------------------------------|-------------------------------|
| Classification Temperature, °C | 1050 | 1260 | 1260 | 1350 | 1430 |
| Service Temperature, °C | <1000 | 1050 | 1100 | 1200 | 1350 |
| Bulk & Density, kg/m ³ | 96-128 | 96-128 | 96-128 | 128-160 | 128-160 |
| Permanent Liner Change, % | -4(1000°C) | -3(1000°C) | -3(1100°C) | -3(1250°C) | -3(1350°C) |
| Thermal Conductivity Under Each Section, W/(m·k) (Bulk density 128kg/m ³) | 0.09 (400°C) 0.176 (800°C) | 0.09 (400°C) 0.176 (800°C) | 0.09 (400°C) 0.176 (800°C) 0.22 (1000°C) | 0.132 (600°C) 0.22 (1000°C) | 0.76 (800°C) 0.20 (1000°C) |
| Strength of Extension, Mpa | 0.08-0.12 | 0.08-0.12 | 0.08-0.12 | 0.08-0.12 | 0.08-0.12 |
| Al ₂ O ₃ , % | 44 | 46 | 47-49 | 52-55 | 39-40 |
| Al ₂ O ₃ +SiO ₂ , % | 96 | 97 | 99 | 99 | - |
| Al ₂ O ₃ +SiO ₂ +ZrO ₂ , % | - | - | - | - | 99 |
| ZrO ₂ , % | - | - | - | - | 15~17 |
| Fe ₂ O ₃ , % | <1.2 | <1.0 | 0.2 | 0.2 | 0.2 |
| Na ₂ O+K ₂ O, % | ≤0.5 | ≤0.5 | 0.2 | 0.2 | 0.2 |
| Size, mm | Standard Size:7200*610*6-60, Customized Sizes | | | | |



Lightweight
High Strength.



High Compressive
Strength



Evenly Heated



Good Toughness

Application:

Ceramic fiber board is a kind of refractory material, usually composed of alumina and silicate, and it is also called an aluminum silicate board.

Technical Data:

| Item | Ordinary Type | Standard Type | High Purity Type | High Alumina Type | Zirconium Containing Type |
|---|--|---------------|------------------|-------------------|---------------------------|
| Classification Temperature, °C | 1100 | 1260 | 1260 | 1360 | 1430 |
| Working Temperature, °C | <1000 | 1050 | 1100 | 1200 | 1350 |
| Bulk & Density, kg/m ³ | 260-320 | 260-320 | 260-320 | 260-320 | 260-320 |
| Permanent Liner Change, % | -4(1000°C) | -3(1000°C) | -3(1000°C) | -3(1250°C) | -3(1350°C) |
| Heat Conductivity Coefficient, W/(m·k) (Bulk density 128kg/m ³) | 0.09 (400°C), | | 0.176 (800°C), | 0.22 (1000°C) | |
| Strength of Extension, Mpa | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Al ₂ O ₃ , % | 44 | 46 | 46~49 | 52-55 | 39-40 |
| Al ₂ O ₃ +SiO ₂ , % | 96 | 97 | 99 | 99 | - |
| Al ₂ O ₃ +SiO ₂ +ZrO ₂ , % | - | - | - | - | 99 |
| ZrO ₂ , % | - | - | - | - | 15~17 |
| Fe ₂ O ₃ , % | <1.2 | <1.0 | 0.2 | 0.2 | 0.2 |
| Na ₂ O+K ₂ O, % | ≤0.5 | ≤0.5 | 0.2 | 0.2 | 0.2 |
| Size, mm | Length, Width Regular Size, Thickness 3-100mm, Customized Size | | | | |

Ceramic Fiber Cloth



Metal Erosion
Ability



Non-Toxic, Harmless,
And Odorless



Electrical Insulation
Properties



Acid and Alkali
Corrosion Resistance

Application:

Ceramic fiber cloth is a woven fabric made of ceramic fiber yarn. The main raw materials include alumina, silicate or borate, etc. It has excellent heat resistance and chemical stability.

Technical Data:

| Item | Ceramic Fiber Cloth | | Ceramic Fiber Tape | |
|--------------------------------------|---------------------|-----------------|---------------------|-----------------|
| | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel |
| Physical Property | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel |
| Bulk Density, kg/m ³ | 500 | | 500 | |
| Size, mm | 30000 x 1000 x 2/3 | | 30000 x 50/75 x 2/3 | |
| Moisture Content, % | ≤2 | | ≤2 | |
| Continuous Temperature Use Limit, °C | 650 | 1050 | 600 | 1050 |
| Organic Content, % | ≤15 | | ≤15 | |



Thermal Shock
Resistance



High-Temperature
Resistance



Electrical
Insulation



Environmental
Friendly

Application:

Ceramic fiber paper is a paper refractory product made of ceramic fibers, also called aluminum silicate fiber paper. Ceramic fiber paper is a high-temperature refractory material, usually made of inorganic oxide fibers,

Technical Data:

| Item | | STD Paper | HD Paper |
|--|--------|-----------|----------|
| Classification Temperature, °C | | 1260 | 1350 |
| Al ₂ O ₃ , % | | 42-47 | 44-50 |
| SiO ₂ , % | | 52-57 | 49-55 |
| Color | | White | White |
| Bulk Density, kg/m ³ | | 200 | 240 |
| Tensile Strength, MPa | | 0.4 | 0.7 |
| Loss of Ignition, % | | ≤10 | ≤6 |
| Thermal Conductivity Coefficient, W/(m·K) | 200°C | 0.06 | 0.06 |
| | 400°C | 0.09 | 0.08 |
| | 600°C | 0.13 | 0.13 |
| | 800°C | 0.20 | 0.19 |
| | 1000°C | / | 0.29 |
| | 1200°C | / | 0.43 |



Good Thermal Shock Resistance



Environmentally Friendly



Low Thermal Conductivity



Good Chemical Stability

Application:

Ceramic fiber cotton is made of high-purity silicon and aluminum raw materials using spinning or blowing processes. In addition, in the vacuum forming process, ceramic bulk fiber is the basis for ceramic fiber blankets, boards, papers and other products.

Technical Data:

| Item | STD BULK | | | HP BULK | HA BULK | HZ BULK |
|------------------------------------|----------|-------|---------|---------|---------|---------|
| | Spun | Blown | Chopped | | | |
| Classification Temperature, °C | 1260 | 1260 | 1260 | 1260 | 1350 | 1430 |
| Al ₂ O ₃ , % | ≥43 | ≥43 | ≥43 | ≥44 | ≥52 | ≥35 |
| SiO ₂ , % | ≥54 | ≥54 | ≥54 | ≥55 | ≥47 | ≥49 |
| ZrO ₂ , % | - | | | | | ≥15 |
| Color | White | | | | | |
| Shot Content, % | ≤15 | ≤15 | ≤12 | ≤15 | ≤15 | ≤12 |
| Fiber Diameter, μm | 3-5 | 2-4 | 2-4 | 3-5 | 2-4 | 3-5 |

Ceramic Fiber Rope



High-Temperature
Stability



Chemical
Resistance



Efficient
Insulation



Sound
Insulation

Application:

Ceramic fiber rope is made of ceramic fiber spun yarn and is often used as heat insulation material. It is an excellent substitute for asbestos rope. Ceramic fiber rope can be divided into twisted rope, square rope, and round rope.

Technical Data:

| Item | Round Braided Rope | | Square Braided Rope | | Twisted Rope | | Woolen Rope |
|--------------------------------------|--------------------|-----------------|---------------------|-----------------|--------------|-----------------|-------------|
| | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel | Glass Fiber |
| Reinforcement | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel | Glass Fiber | Stainless Steel | Glass Fiber |
| Continuous Temperature Use Limit, °C | 650 | 1000 | 650 | 1000 | 650 | 1000 | 650 |
| Color | White | | White | | White | | White |
| Bulk Density, kg/m ³ | 500 | | 500 | | 300 | | 380 |
| Organic Content, % | 15 | | 15 | | ≤15 | | ≤15 |

Ceramic Fiber Module



Low Thermal
Conductivity



Shock
Resistance



Great Wear
Resistance



Easy
Installation

Application:

Ceramic fiber module uses advanced ceramic fiber technology to optimize the fiber fineness and structure to provide excellent thermal insulation performance and durability. It is made of ceramic fiber blankets that are folded or stacked and pressed into rectangular modules and employs non-exposed anchorage for economical installation and mechanical linkage.

Technical Data:

| Item | STD Module | HP Module | HA Module | HZ Module |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|
| Classification Temperature, °C | 1260 | 1260 | 1350 | 1430 |
| Al ₂ O ₃ , % | ≥43 | ≥44 | ≥52 | ≥35 |
| SiO ₂ , % | ≥54 | ≥55 | ≥47 | ≥49 |
| ZrO ₂ , % | - | - | - | ≥15 |
| Color | White | White | White | White |
| Bulk Density, kg/m ³ | 160-220 | 160-220 | 160-220 | 160-220 |
| Permanent Linear Change, % | 1000°C*24h ≤2.5 | 1100°C*24h ≤2.5 | 1200°C*24h ≤2.5 | 1350°C*24h ≤2.5 |
| Chemical Composition | 400°C | 0.10 | 0.10 | 0.10 |
| | 600°C | 0.18 | 0.17 | 0.16 |
| | 800°C | 0.20 | 0.20 | 0.20 |
| | 1000°C | 0.27 | 0.26 | 0.26 |



High temperature
up to 1800°C



Resistant to sudden
cold and hot



High chemical
etching resistance.



Various kinds
of shape

Application:

Alumina ceramics are ceramic materials based on alumina (Al_2O_3) for thick film integrated circuits. Alumina ceramics have good conductivity, mechanical strength and high temperature resistance.

Technical Data:

| Item | Alumina | | | | |
|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|
| | AL997 | AL995 | AL99 | AL95 | AL60 |
| Index | AL997 | AL995 | AL99 | AL95 | AL60 |
| Main Ingredient Content | 99.70% | 99.5% | 99.0% | 95% | 60% |
| Air Tightness | Airtight | Airtight | Airtight | Airtight | Airtight |
| Bulk Density, kg/m ³ | 3.94 | 3.9 | 3.8 | 3.75 | 3 |
| Hardness | 9 | 9 | 9 | 8.8 | 7.5 |
| Water Absorption | ≤0.2 | ≤0.2 | ≤0.2 | ≤0.2 | ≤0.2 |
| Flexural Strength, 20°C | 375 | 370 | 340 | 304 | 205 |
| Compressive Strength, 20°C | 2300 | 2300 | 2210 | 1910 | 1820 |
| Thermal Expansion Coefficient, 25°C-800°C | 7.6 | 7.6 | 7.6 | 7.6 | 7.1 |
| Dielectric Strength, 5mm | 10 | 10 | 10 | 10 | 9 |
| Dielectric Loss, 25°C @MHZ | <0.0001 | <0.0001 | 0.0006 | 0.0004 | 0.0007 |
| Permittivity, 25°C @MHZ | 9.8 | 9.7 | 9.5 | 9.2 | 8.6 |
| Volume Resistivity, 20°C | >10 ¹⁴ 2*10 ¹² | >10 ¹⁴ 2*10 ¹² | >10 ¹⁴ 4*10 ¹¹ | >10 ¹⁴ 2*10 ¹¹ | >10 ¹⁴ >10 ¹³ |
| Long-term Use Temperature, °C | 1700 | 1650 | 1600 | 1400 | 1100 |
| Thermal Conductivity 25°C, W/(m·K) | 35 | 35 | 34 | 20 | 16 |

| Item | MgO | Mullite | ZrO ₂ | Si ₃ N ₄ |
|---|-------------------|--------------------------------------|-------------------------------------|--|
| Main Ingredient Content | - | - | - | <92% |
| Air Tightness | Airtight | Airtight | Airtight | Airtight |
| Bulk Density, kg/m ³ | 3.58 | 2.6 | 6.01 | 3.1 |
| Hardness | 6 | 8 | 8.5 | 9.4 |
| Water Absorption | 0 | 0 | 0 | 0 |
| Flexural Strength, 20°C | 140 | 120 | 1200 | 150 |
| Compressive Strength, 20°C | 550 | 500 | 5700 | 490 |
| Thermal Expansion Coefficient, 25°C-800°C | 13 | 5.6 | 10 | 2.9 |
| Dielectric Strength, 5mm | - | 10.2 | - | - |
| Dielectric Loss, 25°C @MHZ | - | 0.002 | 0.001 | 0.001-0.1 |
| Permittivity, 25°C @MHZ | - | 6 | 29 | 8.3 |
| Volume Resistivity, 20°C | >10 ¹⁴ | >10 ¹⁴ 5*10 ¹² | >10 ¹³ 5*10 ⁸ | 10 ¹¹ -10 ¹² 4*10 ⁸ |
| Long-term Use Temperature, °C | 2300 | 1600 | 1600 | 1300 |
| Thermal Conductivity 25°C, W/(m·K) | 36 | 3.6 | 3 | 9.46 |

| Item | Recrystallized Silicon Carbide | Silicon Nitride Bonded Silicon Carbide | Boron Nitride |
|---|--------------------------------|--|-----------------------------------|
| Main Ingredient Content | - | - | <99.2% |
| Air Tightness | - | Airtight | Apparent Porosity ≤0.1 |
| Bulk Density, kg/m ³ | 2.7 | 2.8 | 2.0-2.2 |
| Hardness | 9.5 | 9 | 2 |
| Water Absorption | 0 | 0 | 0 |
| Flexural Strength, 20°C | 90 | 180 | 30 |
| Compressive Strength, 20°C | 600 | 650 | 58 |
| Thermal Expansion Coefficient, 25°C-800°C | 4.7 | 5 | 1.5 |
| Dielectric Strength, 5mm | - | - | - |
| Dielectric Loss, 25°C @MHZ | - | - | 0.00025 |
| Permittivity, 25°C @MHZ | - | - | 4 |
| Volume Resistivity, 20°C | - | - | 10 ⁸ -10 ¹⁴ |
| Long-term Use Temperature, °C | 1650 | 1450 | In Air Is 900 |
| Thermal Conductivity 25°C, W/(m·K) | 23 | 15 | 30 |



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