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Specialized in customizing refractory products for the **HIGH-TEMPERATURE INDUSTRY**
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.

About Us

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. The products are exported to Europe, America, Oceania, Southeast Asia, the Middle East and more than 50 countries and regions in the world.
Industries and Applications
Serving the Global High-temperature Industry

Metallurgical Industry
- Ferrous industry: steel / iron
- Non-ferrous industry: aluminium / lead / zinc / copper

Building Materials Industry
- Cement / lime kiln
- Glass

Power Industry and Others
- Power Station
- Industrial Boiler
- Energy
- Chemical Industry
Shaped Refractories

Magnesia Alumina Brick
Often used for the basic of open hearth and the tops of EAF.
- Magnesia Alumina Brick
- Magnesia Alumina Spinel Brick-Chrome Compound
- Magnesia Alumina Spinel Brick

Magnesia Chrome Brick
Mainly used in the metallurgical industry, such as constructing open hearth furnace tops, electric furnace tops, external refining furnaces, and various non-ferrous metal smelting furnaces.
- Rebonding Magnesia Chrome Brick
- Fused Half Combine MgO-chrome Brick
- Direct Combination of MgO-chrome Brick
- Sintered Magnesia Chrome Brick
- Special MgO-chrome Brick

<table>
<thead>
<tr>
<th>Item</th>
<th>Index</th>
</tr>
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<tbody>
<tr>
<td>MgO (%)</td>
<td>≥ 80</td>
</tr>
<tr>
<td>Al₂O₃ (%)</td>
<td>≥ 10</td>
</tr>
<tr>
<td>Apparent Porosity (%)</td>
<td>≤ 17</td>
</tr>
<tr>
<td>Bulk Density (g/cm³)</td>
<td>≥ 2.90</td>
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<tr>
<td>Cold Crushing Strength (Mpa)</td>
<td>≥ 50</td>
</tr>
<tr>
<td>Permanent Linear Change (1500°C*2h)(%)</td>
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</tr>
<tr>
<td>Modulus of Rapture (1350°C*0.5h)(MPa)</td>
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<tr>
<td>Thermal Shock Resistances (1100°C, Water Cooling) (Cycle)</td>
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</tr>
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<table>
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<tr>
<th>Item/Grade</th>
<th>MGc-16A</th>
<th>MGc-16B</th>
<th>MGc-12A</th>
<th>MGc-12B</th>
<th>MGc-8A</th>
<th>MGc-8B</th>
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<td>55</td>
<td>65</td>
<td>60</td>
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<td>Cr₂O₃ (%)</td>
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<td>8</td>
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<td>25</td>
<td>35</td>
<td>30</td>
<td>35</td>
<td>30</td>
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<td>1550</td>
<td>1650</td>
<td>1550</td>
<td>1650</td>
<td>1530</td>
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</table>
Shaped Refractories

Magnesia Carbon Brick
Mainly used for the inner parts of converters, ladles, EAF, etc.

<table>
<thead>
<tr>
<th>Item/Grade</th>
<th>Apparent Porosity (%)</th>
<th>Bulk Density (g/cm³)</th>
<th>Cold Crushing Strength (MPa)</th>
<th>High-temperature Standing Strength (1600°C×0.5h/3MPa)</th>
<th>MgO (%)</th>
<th>C (%)</th>
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<tr>
<td>MT-10A</td>
<td>4.0</td>
<td>3.02</td>
<td>40.0</td>
<td>6.0</td>
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<td>79.0</td>
<td>10.0</td>
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<tr>
<td>MT-10C</td>
<td>5.0</td>
<td>2.92</td>
<td>35.0</td>
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<td>77.0</td>
<td>10.0</td>
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<td>MT-10D</td>
<td>6.0</td>
<td>2.87</td>
<td>35.0</td>
<td>/</td>
<td>75.0</td>
<td>10.0</td>
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<tr>
<td>MT-12A</td>
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<td>40.0</td>
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<td>78.0</td>
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<td>MT-12B</td>
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<td>2.94</td>
<td>35.0</td>
<td>/</td>
<td>77.0</td>
<td>12.0</td>
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<tr>
<td>MT-12C</td>
<td>4.5</td>
<td>2.92</td>
<td>35.0</td>
<td>/</td>
<td>75.0</td>
<td>12.0</td>
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<td>MT-12D</td>
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<td>76.0</td>
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<td>MT-14B</td>
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<td>MT-16A</td>
<td>3.5</td>
<td>2.92</td>
<td>35.0</td>
<td>8.0</td>
<td>74.0</td>
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<td>MT-16B</td>
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<td>35.0</td>
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<td>72.0</td>
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<td>MT-16C</td>
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<td>16.0</td>
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<td>MT-18A</td>
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<td>72.0</td>
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<td>70.0</td>
<td>18.0</td>
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<td>MT-18C</td>
<td>4.0</td>
<td>2.79</td>
<td>30.0</td>
<td>/</td>
<td>69.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>

Magnesia Brick
On the heating furnace and average heat furnace, magnesia bricks are mainly used for paving the surface layer of the bottom of the furnace and the lower part of the average heat furnace wall, which can resist the erosion of the oxide.

- Sintered Magnesia Brick
- Fused Rebounded Magnesia Brick
- Magnesia Olivine Brick and Magnesia Zirconium Brick

<table>
<thead>
<tr>
<th>Item/Grade</th>
<th>M-98</th>
<th>M-97A</th>
<th>M-97B</th>
<th>M-95A</th>
<th>M-95B</th>
<th>M-91</th>
<th>M-89</th>
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<tbody>
<tr>
<td>MgO (%)</td>
<td>≥</td>
<td>97.5</td>
<td>97.0</td>
<td>96.5</td>
<td>95.0</td>
<td>94.5</td>
<td>91.0</td>
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<tr>
<td>SiO₂ (%)</td>
<td>≤</td>
<td>1.00</td>
<td>1.20</td>
<td>1.50</td>
<td>2.00</td>
<td>2.50</td>
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<tr>
<td>CaO (%)</td>
<td>≤</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>2.00</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Apparent Porosity (%)</td>
<td>≤</td>
<td>16</td>
<td>16</td>
<td>18</td>
<td>16</td>
<td>18</td>
<td>18</td>
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<tr>
<td>Bulk Density (g/cm³)</td>
<td>≥</td>
<td>3.00</td>
<td>3.00</td>
<td>2.95</td>
<td>2.90</td>
<td>2.85</td>
<td></td>
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<tr>
<td>Cold Crushing Strength (MPa)</td>
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<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>0.2MPa Refractoriness Under Load (T°C)</td>
<td>≥</td>
<td>1700</td>
<td>1700</td>
<td>1650</td>
<td>1560</td>
<td>1500</td>
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<tr>
<td>Permanent Linear Change(%)</td>
<td>Xmin-Xmax</td>
<td>1650°C×2h -0.2-0</td>
<td>1650°C×2h -0.3-0</td>
<td>1600°C×2h -0.4-0</td>
<td>1600°C×2h -0.6-0</td>
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</table>
**High Alumina Brick**

- Mainly used for lining blast furnace, hot blast furnace, EAF tops, reverberatory and rotary kilns.
- Low Creep High Alumina Brick
- Low Creep Mullite and Corundum Mullite Brick
- Anti-stripping Alumina Brick
- Andalusite Brick

<table>
<thead>
<tr>
<th>Item/Grade</th>
<th>LZ-80</th>
<th>LZ-75</th>
<th>LZ-70</th>
<th>LZ-65</th>
<th>LZ-55</th>
<th>LZ-48</th>
<th>LZ-75G</th>
<th>LZ-65G</th>
<th>LZ-55G</th>
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</thead>
<tbody>
<tr>
<td>Al₂O₃ (%)</td>
<td>≥ 80</td>
<td>75</td>
<td>70</td>
<td>65</td>
<td>55</td>
<td>48</td>
<td>75</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Apparent Porosity (%)</td>
<td>≤ 21 (23)</td>
<td>24 (26)</td>
<td>24 (26)</td>
<td>24 (26)</td>
<td>22 (24)</td>
<td>22 (24)</td>
<td>19</td>
<td>19</td>
<td>19</td>
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<tr>
<td>Cold Crushing Strength (MPa)</td>
<td>≥ 70 (60)</td>
<td>60 (50)</td>
<td>55 (45)</td>
<td>50 (40)</td>
<td>45 (40)</td>
<td>40 (35)</td>
<td>65</td>
<td>60</td>
<td>50</td>
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<tr>
<td>0.2MPa Refractoriness Under Load (°C)</td>
<td>≥ 1530</td>
<td>1520</td>
<td>1510</td>
<td>1500</td>
<td>1450</td>
<td>1420</td>
<td>1520</td>
<td>1500</td>
<td>1470</td>
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</table>

**Silica Brick**

- Mainly used for structural materials for coking furnace, glass melting kiln, acid steelmaking furnace and other thermal equipment.
- Silica Brick for Hot Blast Furnace
- Silica Brick for Coke Oven

<table>
<thead>
<tr>
<th>Item/Grade</th>
<th>GZ-94</th>
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<tbody>
<tr>
<td>SiO₂ (%)</td>
<td>≥ 94</td>
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<tr>
<td>Fe₂O₃ (%)</td>
<td>≤ 1.4</td>
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<tr>
<td>Apparent Porosity (%)</td>
<td>≤ 24</td>
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<tr>
<td>True Density (g/cm³)</td>
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<tr>
<td>Cold Crushing Strength (MPa)</td>
<td>≥ 30</td>
</tr>
<tr>
<td>0.2MPa Refractoriness Under Load (°C)</td>
<td>≥ 1650</td>
</tr>
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</table>
Shaped Refractories

Low Creep Checker Brick
Mainly used in the middle and upper part of the heat stove heat storage room, which has a heat storage effect.

<table>
<thead>
<tr>
<th>Item/Grade</th>
<th>DRL-155</th>
<th>DRL-150</th>
<th>DRL-145</th>
<th>DRL-140</th>
<th>DRL-135</th>
<th>DRL-130</th>
<th>DRL-127</th>
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<tbody>
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<td>Al₂O₃ (%)</td>
<td>≥ 75</td>
<td>75</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>60</td>
<td>50</td>
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<td>Apparent Porosity (%)</td>
<td>≤ 20</td>
<td>21</td>
<td>21</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Bulk Density*(g/cm³)</td>
<td>2.60–2.85</td>
<td>2.60–2.85</td>
<td>2.50–2.70</td>
<td>2.40–2.60</td>
<td>2.35–2.55</td>
<td>2.35–2.50</td>
<td>2.30–2.50</td>
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<td>Cold Crushing Strength* (MPa)</td>
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<td>60</td>
<td>55</td>
<td>55</td>
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<td>50</td>
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<tr>
<td>0.2MPa Creep Rate (%) 50h</td>
<td>≤ 1550°C 0.8</td>
<td>1500°C 0.8</td>
<td>1450°C 0.8</td>
<td>1400°C 0.8</td>
<td>1350°C 0.8</td>
<td>1300°C 0.8</td>
<td>1270°C 0.8</td>
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<tr>
<td>Permanent Linear Change (%)</td>
<td>Xmin 1500°C*2h -0.2–0.2</td>
<td>1500°C*2h -0.2–0.2</td>
<td>1450°C*2h -0.2–0.2</td>
<td>1450°C*2h -0.3–0.2</td>
<td></td>
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</tbody>
</table>

Monolithic Refractory

They are used for various high-temperature industrial equipment.
- RH Furnace Corundum Spinel Castable and Corundum Castable
- Magnesia Chrome Qualitative Castable
- Alumina Chrome Castable
- Magnesia Ramming Mass
- Refractory Castable for Heating Furnace
- Ladle Castable
- Tundish Unshaped Refractory
- Dry-vibrating Refractory
- Lightweight Insulating Castable
- Refractory Mortar
Typical Configuration

Blast Furnace
- Sillimanite brick, SiAlon bonded sillimanite brick
- Sillimanite brick, SiAlon bonded corundum brick
- Fired microperora alumina carbon brick
- Si3N4-8IC-71 SL-70, SiAlon bonded corundum brick
- Corundum mullite brick, SiAlon bonded corundum brick, Composite corundum brick
- High alumina brick

Hot Blast Furnace
- Silica brick for hot blast furnace, Low creep high alumina brick, Andalusite brick
- Low creep high alumina brick, Andalusite brick
- Low creep fire clay brick
- Mullite brick, Low creep high alumina brick, Andalusite brick
- Mullite brick, Corundum mullite brick
- Fire clay brick

Mixer Furnace
- Silica carbide brick, Composite corundum brick
- Magnesia brick, High alumina brick
- High alumina brick, Fire clay brick
- Diatomite brick
- Micro expansion high alumina brick

Converter
- Steel tapping side
- Trunnion
- Lining
- Bottom
Typical Configuration

Ladle and Tundish
- Magnesia based gunning materials, Corundum spinel, High alumina spinel
- Self flowing castable, Thermal insulation refractory materials
- Chrome corundum brick
- Alumina carbon, Corundum mullite products
- Chromium corundum brick, Magnesia brick
- Magnesia, MgO-CaO Refractory Spray Coating
- High alumina brick, Fire clay brick

Torpedo Car
- High alumina steel fiber reinforced castable
- RTSC-70 brick
- Fire clay brick
- RTHSC-50, RTFSC-55 brick
- High alumina castable
Typical Configuration

RH Refining Furnace
- Corundum spool castable
- Fused half combine mg-chrome brick
- Refractory magnesium chrome brick
- Fused half combine mg-chrome brick
- Refractory magnesium chrome brick
- Sintered magnesium chrome brick
- Alumina magnesium carbon brick
- High alumina insulation brick
- Sintered magnesium chrome brick
- Direct combination of Mg-chrome brick
- Corundum castable
- Fused half combine mg-chrome brick
- Refractory magnesium chrome brick
- Fused half combine mg-chrome brick
- Sintered magnesium chrome brick
- Magnesia chromium refractory ramming materials

AOD Refining Furnace
- Sintered magnesium chrome brick
- Direct combination of Mg-chrome brick
- Fused half combine mg-chrome brick
- Refractory magnesium chrome brick
- Refractory magnesium chrome brick
- Magnesia chromium refractory ramming materials
- Alumina chromium castable
- Sintered magnesium chrome brick
KERUI all over the world

Kerui Refractory has a steady and widespread customer base both at home and abroad. With more than 20 years’ development and upgrading, KERUI has become the first choice of worldwide customers across 5 continents, including Asia, Europe, North America, South America, 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.
Comprehensive Service System

KERUI provides a full range of professional service from pre-sales to after-sales.

- Installation of refractory equipment
- Stock in storage of refractory products
- Research & development on new technology
- Training of refractory technology
- EPC and maintenance
- Materials selection and solutions provided of refractory materials