



**CÔNG TY TNHH VẬT LIỆU
CHỊU LỬA BẢO SƠN**

**COMPANY
PROFILE**

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COMPANY

INTRODUCTION

Bao Son Refractory was founded in 2007 at 98 Hanoi Highway, Long Binh Tan, Bien Hoa, Dong Nai, Vietnam.

Bao Son Refractory specializes in manufacturing and trading refractory materials, insulation materials, and soundproof materials for heavy industries, metallurgy, textile industry, chemical production, cement, steel, etc. With modern equipment, advanced warehousing systems, and skilled labor force, Bao Son Refractory is committed to providing high-quality products, guaranteed delivery schedules, reasonable prices, and dedicated customer service to meet the requirements and needs of customers.

Bao Son has also exported its products to many countries such as the United States, India, Japan... with high quality that meets the requirements of customers.





VISION

- Become a wholesale and retail supplier of heat-resistant materials in the global market
- Become a reliable partner for large construction projects that use fire-resistant, heat-resistant, insulation, and soundproofing materials

MISSION

- For customers: provide high-quality products, goods, and services at competitive prices
- For partners: maintain credibility and respect in cooperation to develop together
- For employees: create job opportunities and stable income, improve the spiritual and material life of employees
- For society: contribute to building a prosperous and developed society

FIRE BRICK

Fire brick with an aluminum alloy (Al_2O_3) content of 20-22%, are highly durable, have low thermal conductivity and can withstand thermal shock.

Applications:

Fire brick are widely used in the construction of furnaces for metal smelting, glass-making, waste incineration, and many other industrial applications.



Features:

- Low thermal conductivity, good thermal insulation performance
- Long service life, easy operation, could be shaped freely
- Product specification: standard form, normal standard, shaped and special shaped bricks



| Item | Test Result |
|---|-------------|
| Bulk Density (g/cm ³) | 1.95 |
| Al_2O_3 (% min) | 20.3 |
| Fe_2O_3 (%) | 1.66 |
| Apparent Porosity (%) | 24.4 |
| Refractoriness (°C) | 1530 |
| Cold Crushing Strength (Mpa) | 13.4 |
| Refractoriness under load, 0.2 Mpa, \geq (°C) | 1390 |

OTHER SPECIFICATIONS OF FIRE BRICK

Fire bricks have various shapes and sizes according to customer requirements, such as rectangular-shaped refractory bricks, thin fire brick, wagon surface bricks, 7 inch fire brick, beveled brick, etc.



1.

Thin Fire Brick



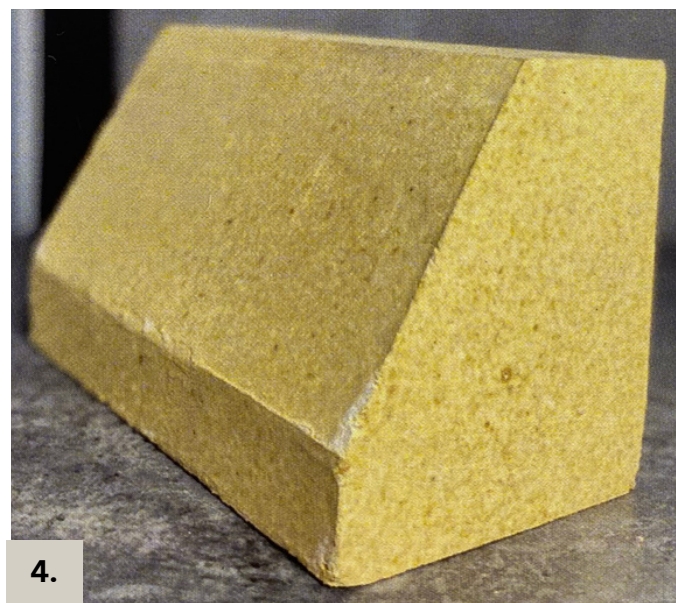
2.

Wagon Surface Bricks



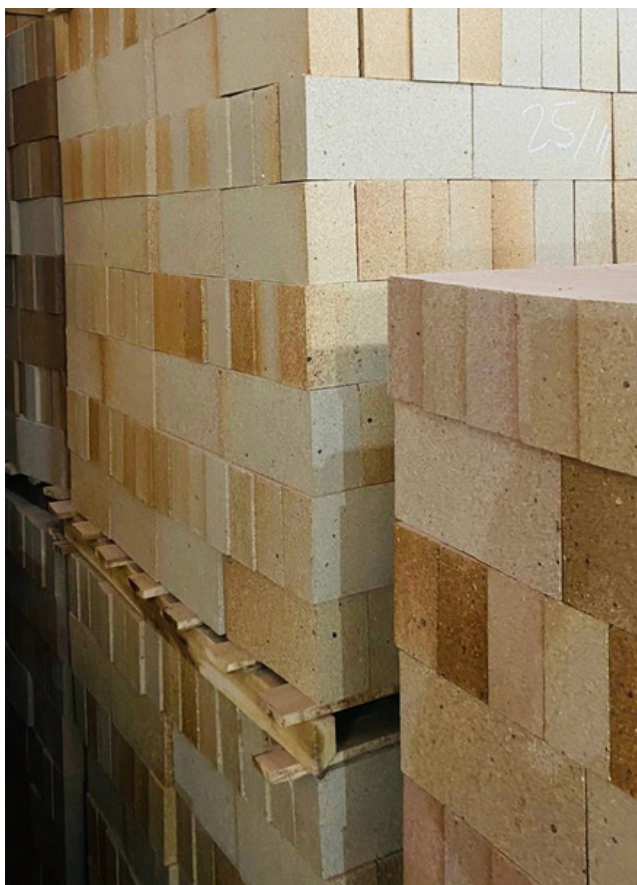
3.

7 Inch Fire Brick



4.

Beveled Brick



HIGH ALUMINA BRICK

High alumina bricks are produced with selected bauxite chamotte by advanced process and strict quality control. The main mineral components are corundum and mullite phases

Applications:

- Steel furnaces
- Iron making furnaces
- Glass kiln
- Ceramic tunnel kiln
- Cement kiln

| Item | 35% High Alumina Brick | 38% High Alumina Brick | 42% High Alumina Brick | 50% High Alumina Brick |
|---|------------------------|------------------------|------------------------|------------------------|
| Bulk Density | 2.2 | 2.25 | 2.3 | 2.3 |
| Al₂O₃ (% min) | 35 | 38 | 42 | 50 |
| Fe₂O₃ (%) | 2 | 1.97 | 1.7 | 1.7 |
| Apparent Porosity | 20 | 21 | 22 | 23 |
| Refractoriness (°C) | 1750 | 1750 | 1770 | 1770 |
| Cold Crushing Strength (Mpa) | 40 | 50 | 55 | 55 |
| Refractoriness under load, 0.2 Mpa, ≥ (°C) | 1550 | 1550 | 1550 | 1550 |



Features:

- Resisting high temperature
- Great bulk density
- Low iron content
- Good eroding resistance

INSULATION BRICK

Insulation bricks are capable of withstanding maximum heat of 1400°C. Each grade of brick is formulated to meet specific thermal and physical requirements. After firing each brick is machined to close dimensional tolerances.

Applications:

- Primary hot face linings
- Back-up insulation for furnaces and kilns
- Flue insulation
- Sulphur recovery equipment
- Hot blast stoves

| Item | | B-2 |
|---|-------|------|
| Bulk Density (g/cm ³) | | 0.79 |
| SiO ₂ (%) | | 58.8 |
| Al ₂ O ₃ (%) | | 35 |
| Fe ₂ O ₃ (%) | | 1 |
| Temp of reheat liner change less than 2% (°C) | | 1250 |
| Thermal Conductivity (W/M.K) | 110°C | 0.17 |
| | 350°C | 0.22 |
| Crushing Strength (Mpa) | | 2.5 |



Features:

- High insulating properties
- Strong compressive strength
- Low heat storage
- High purity
- Tight dimensional tolerance
- Energy saving
- Low impurities



CONVENTIONAL DENSE CASTABLE

Conventional castable is mixed by high quality bauxite, silica fume, and refractory cement, Formulas can be changed according to different applications. Usually we classify the conventional castable by the content of Al_2O_3 , when the content of Al_2O_3 is less than 40%, we call it conventional castable.



Features:

- Good abrasion resistance
- Good thermal shock resistance
- Good high-temperature resistance

Applications:

- Boiler (CFB, Chain Boiler, etc)
- Steel Industrial

| Item | BSC-13 | Unit | Standard |
|--------------------------------------|-----------|-------------------|-----------|
| Chemical composition | | | TCVN 6553 |
| Al_2O_3 | ≥ 30 | % | |
| SiO_2 | 55 | % | |
| Fe_2O_3 | 3 | % | |
| CaO | 8.7 | % | |
| Bulk density | 2.1 | g/cm ³ | TCVN 6553 |
| Refractoriness | 1350 | °C | TCVN 6553 |
| Cold crushing strength | | | TCVN 6553 |
| After drying at 110°C | 40 | Mpa | |
| After firing at 1400°C, 3h | 45 | Mpa | |
| Thermal conductivity at 800°C | 0.6 | W/m/K | TCVN 6553 |



HIGH ALUMINA CASTABLE

HIGH ALUMINA CASTABLE



High Alumina castable is mixed by high quality bauxite, Mullite, andalusite or Corundum as aggregate, Silica Powder, α -alumina powder as micro powder, refractory cement as binder, also some additive to make better performance. Formulas are changed according to different applications.

Features:

- Excellent abrasion resistance
- Excellent high-temperature resistance
- Excellent Crushing Strength
- Anti-corrode

Applications:

- Incinerators, Aluminium, Cement Industrial.
- Steel Industrial (Ladle, Tundish, Induction Furnace, etc)

| Item | BSC-14 | BSC-15 | Unit | Standard |
|--------------------------------------|--------|--------|-------------------|-----------|
| Chemical composition | | | | TCVN 6553 |
| Al₂O₃ | ≥45 | ≥60 | % | |
| SiO₂ | 38 | 21 | % | |
| Fe₂O₃ | 2.5 | 2.5 | % | |
| CaO | 8.7 | 5.5 | % | |
| Bulk density | 2.3 | 2.4 | g/cm ³ | TCVN 6553 |
| Refractoriness | 1430 | 1570 | °C | TCVN 6553 |
| Cold crushing strength | | | | TCVN 6553 |
| After drying at 110°C | 45 | 55 | Mpa | |
| After firing at 1400°C, 3h | 50 | 60 | Mpa | |
| Thermal conductivity at 800°C | 0.6 | 0.8 | W/m/K | TCVN 6553 |

INSULATION CASTABLE



The material basis of insulation castable can be Perlite, vermiculite, light weight clay, light weight mullite or bubble alumina according to the different working temperature.

Features:

- Low Density
- Low Heat Thermal Conductivity

Applications:

- Furnace/Back-Up Linings
- Other Insulating Linings

| Item | Value | Unit | Standard |
|--|-------|-------------------|--------------------|
| Chemical composition | | | TCVN 6533:1999 |
| Al₂O₃ | 36 | % | |
| SiO₂ | 38 | % | |
| CaO | 19.3 | % | |
| Bulk density | 1.1 | g/cm ³ | ASTM C134 |
| Permanent change on heating at 815°C/3h | 0.1 | % | ASTM C133 |
| Thermal conductivity (Thot = 850°C) | 1,48 | W/mK | ASTM C177 |
| Cold crushing strength | | | TCVN 7949 - 1:2008 |
| After drying at 110°C | 5,01 | Mpa | |
| After firing at 1000°C, 3h | 6,37 | Mpa | |

CÔNG TY TNHH VẬT LIỆU CHỊU LỬA BẢO SƠN

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