

High Strength HeatGuard Brick

— A replacement for traditional dense refractory brick & insulation brick

Traditional dense refractory bricks have high density but almost no insulation effect; traditional lightweight insulation materials have good insulation effect but low strength. High Strength HeatGuard Brick combines the high strength of dense refractories with the low thermal conductivity of lightweight insulation materials.

Key Features:

- **Superior Strength:** With high strength, the brick ensures durability and longevity in high-stress environments, reducing the need for frequent replacements and maintenance.
- **Low Thermal Conductivity:** Exceptional insulation properties help maintain optimal temperatures within kilns and furnaces, resulting in significant energy savings and improved operational efficiency.
- **Energy Efficiency:** By providing superior insulation and reducing heat loss, the High Strength HeatGuard Brick contributes to lower energy consumption and operating costs, offering significant long-term savings.
- **Versatile Applications:** Ideal for replacing traditional heavy clay and high-alumina refractory bricks, this brick can be used in a variety of high-temperature settings, including kilns, furnaces, and other industrial processes.

Application

This product is suitable for insulating the inner walls of high-temperature kilns. It can be used directly in the kiln lining process to replace traditional refractory products, achieving long-term energy savings and significant economic benefits. Typical applications include rotary kilns, steel ladles, roller hearth kilns, glass furnaces, electrolytic aluminum smelters, boilers, hot air ducts, and more.

Grade			HHG-1.80	HHG-1.15	HHG-1.25	HHG-1.35
Color			White	Yellowish	Yellowish	Yellowish
Bulk Density		g/cm ³	1.82 ± 0.05	1.15 ± 0.05	1.25 ± 0.05	1.35 ± 0.05
Cold Crushing Strength		MPa	≥ 45	≥ 15	≥ 20	≥ 35
Permanent Linear Change	1450°C × 6h	%	≤ 0.2	-	-	-
	1300°C × 6h	%	-	≤ 0.5	≤ 0.5	≤ 0.5
Thermal Conductivity	@800°C	W/(m·K)	≤ 0.45	≤ 0.35	≤ 0.42	≤ 0.5
	@ 1000°C	W/(m·K)	≤ 0.5	≤ 0.4	≤ 0.47	≤ 0.55
Refractoriness Under Load	0.2MPa, T0.6	°C	≥ 1450	-	≥ 1200	≥ 1250
Modulus of Rupture	@ 1000°C	MPa	≥ 18	-	-	-
Thermal expansion	@800°C	%	0.39	-	-	0.46
	@1000°C	%	0.53	-	-	0.54
Al ₂ O ₃		%	≥ 45	≥ 42	≥ 35	≥ 30
Fe ₂ O ₃		%	≤ 0.8	≤ 0.6	≤ 0.5	≤ 0.4
SiO ₂		%	≤ 50	≤ 45	≤ 42	≤ 40

