



THE QUALITY OF HIGH ALUMINA BRICK-ORDINARY

The ordinary high alumina bricks are made of natural or synthetic high alumina materials such as diaspore, sillimanite, andalusite etc. and using clay as binder. Their refractoriness is high compared with fire clay and silica bricks. It does not easily vitrified at high temperature which benefits the service life of bricks. These bricks

contain about 50-75% Al_2O_3 and very low impurities. It might be characterized by their good resistance to oxides of alkaline earth and many other metals as well as the furnace slags. In case that fireclay or silica bricks can't fulfill the requirements, replace them with ordinary high alumina bricks, you can expect an improvement.

Typical Properties

Brand		HA-7	HA-6	HA-5	HA-4
Properties					
Refractoriness(SK)		> 38	> 38	> 38	> 37
Apparent Porosity(%)		19.0	18.4	20.0	21.0
Bulk Density(g /cm ³)		2.85	2.82	2.50	2.45
Cold Crushing Strength (kg f/cm ²)		800	760	500	700
Refractoriness under load (T ₂ °C)Load:2kgf/cm ²		> 1550	> 1550	> 1500	> 1500
Permanent Linear Change (%) 1500°C -2hrs		-0.3 ~ +0.8	-0.3 ~ +0.8	-0.6 ~ +0.3	-0.6 ~ +0.2
Thermal Expansion (%) at 1000°C		< 0.8	< 0.8	< 0.7	< 0.6
Chemical Composition(%)	Al ₂ O ₃	82.0	80.0	70.0	60.0
	Fe ₂ O ₃	1.6	1.6	1.8	1.8
Characteristics		Spalling resistance	—	—	—
Main Application		Ladle	Ladle	Various furnace	Various furnace

Brand		HA-3	HA-2	HA-3D	HA-2D
Properties					
Refractoriness(SK)		> 36	> 35	> 36	> 35
Apparent Porosity(%)		18.0	17.0	16.5	16.0
Bulk Density(g /cm ³)		2.35	2.35	2.44	2.40
Cold Crushing Strength (kg f/cm ²)		510	450	655	670
Refractoriness under load (T ₂ C)Load:2kgf/cm ²		> 1500	> 1450	> 1500	> 1470
Permanent Linear Change (%) 1500°C -2hrs		-0.6 ~ +0.2	-0.6 ~ +0.2	-0.3 ~ +0.2	-0.3 ~ +0.2
Thermal Expansion (%) at 1000°C		< 0.6	< 0.6	< 0.6	< 0.6
Chemical Composition(%)	Al ₂ O ₃	55.0	50.0	52.0	47.0
	Fe ₂ O ₃	1.8	1.6	1.3	1.2
Characteristics		—	—	High strength	High strength
Main Application		Various furnace	Various furnace	Blast furnace	Blast furnace