

# Refractory Brick

## 耐火砖



AMI supply refractory bricks with various materials, shape, sizes and application. Within the applicable temperature range, each model of refractory bricks can bear diversified physical and chemical change and mechanical effect in high temperature, they are with good performance of high temperature resistant, etching resist, mechanical shock resistance, thermal shock resistance, thermal stability, thermal expansivity, and re-firing linearity index. The refractory bricks can be used as the high temperature constructional material and structural material of various kilns and heat treatment equipments, they are widely applied for metallurgy, foundry, ceramic, glass, cement and building materials industries.

我们供应各种材质、形状、尺寸和用途的耐火砖。在各自适用的温度范围内，每种型号的耐火砖可以在高温下承受各种物理化学条件的变化和机械冲击，具有良好的耐高温性能、耐腐蚀性能、耐机械冲击性能、耐急冷急热性能、热稳定性、热膨胀性和重烧线变化指标。耐火砖是各种窑炉和热处理设备的高温建筑和结构构件材料，广泛应用于冶金铸造、陶瓷、玻璃、水泥和建材行业。

Material 材 质	Bricks 耐火砖	Applicable 适用温度	Application 应用
Al <sub>2</sub> O <sub>3</sub>	Clay Brick 粘土砖	≤1400℃	Various industrial furnace and heat-treatment furnace 各种工业炉和热处理炉
	Diatomite Insulating Brick 硅藻土砖	≤1000℃	
	Light Weight Mullite Insulating Brick 轻质莫来石砖	≤1600℃ ≤1450℃	
	Mullite Insulating Brick for Steelworks 钢厂莫来石砖	≤1450℃	Steel Blast Furnace, Foundry 炼钢热风炉, 铸造
	High Alumina Brick 高铝砖	≤1520℃	Industrial Furnace 各种工业炉
	Phosphate Bounded high Alumina Brick 磷酸盐结合高铝砖	≤1450℃	Cement Rotary Kiln 水泥回转窑
	Corundum Brick 刚玉砖	≤1800℃	Glass & Industrial Furnace 玻璃窑工业炉
Brick 刚玉砖	Chrome Corundum Brick 铬刚玉砖	≤1650℃	Steel, Metallurgy, Building 钢铁、冶金、建材行业
	Zircon Corundum Brick 锆刚玉砖	≤1600℃	
SiC/SiO <sub>2</sub>	Clay Carborundum Brick 粘土质碳化硅砖	≤1450℃	Steel, Nonferrous Metallurgy 钢铁冶金
	Light Weight Silica Brick 轻质硅砖	≤1400℃	Steel, Refractory Furnace 钢铁, 耐火
Mg	Magnesite Brick 镁砖	≤1550℃	Steel, Nonferrous Metallurgy 钢铁冶金
	Magnesia Alumina Brick 镁铝砖	≤1550℃	Steel, Metallurgy, Cement 钢铁冶金水泥
	Magnesia Calcium Brick 镁钙砖	≤1550℃	Steel, Metallurgy 钢铁、冶金
	Magnesia Chrome Brick 镁铬砖	≤1550℃	Steel, Metallurgy 钢铁、冶金
	Magnesia Carbon Brick 镁碳砖	≤1550℃	Steel, Metallurgy 钢铁、冶金
	Magnesia Zirconium Brick 镁锆砖	≤1450℃	Glass Furnace 玻璃窑
	Alumina Magnesia Carbon Brick 铝镁碳砖	≤1550℃	Steel, Metallurgy 钢铁、冶金
	Magnosferrite Brick 镁铁尖晶石砖	≤1500℃	Steel, Metallurgy, Cemen 钢铁冶金水泥
	Forsterite Brick 镁橄榄石砖	≤1550℃	Glass Furnace 玻璃窑
ZrO <sub>2</sub>	Zirconia Brick 熔铸氧化锆砖	≤2200℃	Petrochemical, Refractory 石化、耐火

Please select suitable refractory brick according to the technical parameter & advice from professional technician.

# Clay Brick

## 粘土砖

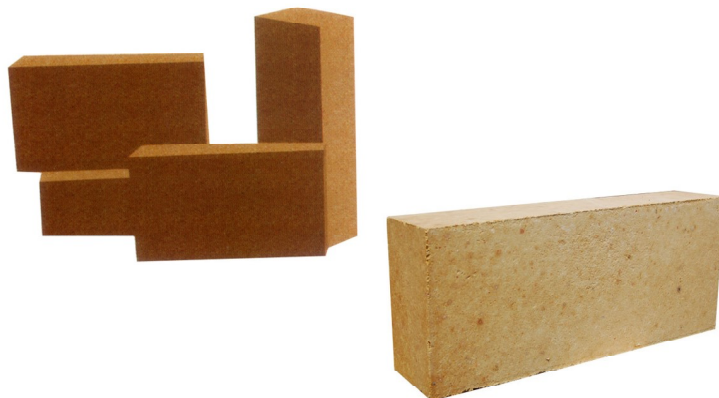
Clay Brick is applied for the masonry of various industrial heat-treatment furnace, blast furnace, hot air oven and as the bricks for molten steel casting.

Voluntary standards: GB/3994-2005.

粘土砖是各种工业炉、热处理装置、热风炉和干烤箱的主要筑炉材料，也是钢铁熔铸装置的主要用砖。

执行标准：GB/3994-2005。

Items 项目	Model 型号	N20	N28J	N30	N36J	N36R	N40J	N40R	N42G	N42R
Al <sub>2</sub> O <sub>3</sub>	% ≥	20	28	30	36	36	40	40	42	42
Fe <sub>2</sub> O <sub>3</sub>	% ≤	--	--	--	--	--	2.0	2.0	1.7	1.5
Refractoriness 耐火度	℃ ≥	1670	1650	1670	1690	1690	1710	1730	1750	1750
0.2MPa Intenerate Temp. under load 0.2MPa 荷重软化温度	℃ ≥	1250	1250	1250	1300	1300	1320	1350	1430	1400
Reburning Linear Variation@1350℃x2hr 重烧线变化@1350℃x2hr	≤	0.3%	0.1%	0.3%	0.1%	0.3%	0.3%	0.3%	--	--
Reburning Linear Variation@1450℃x2hr 重烧线变化@1450℃x2hr	≤	0.4%	0.1%	0.4%	0.1%	--	--	--	0.3%	0.4%
Macro Porosity 显气孔率	% ≤	22	24	24	24	26	25	24	16	24
Compressive Strength (Room T.) MPa 抗压强度 (常温)	≥	20	20	20	20	20	22	24.5	50	29
Bulk Density 密度	g/cm <sup>3</sup> ≥	1.3	1.8	1.9	2.0	2.0	2.2	2.2	2.3	2.3
Special Item by Measured Data 需要测试的特殊项目		--	--	--	--	Thermal Shock 热震性	--	Thermal Shock 热震性	Air Per-Meability 透气性	Thermal Shock 热震性
Applicable Position 应用		General Furnace 各种窑炉	Steel Casting 铸铁	General Furnace 各种窑炉	Steel Casting 铸铁	Hot Blast Furnace 热风炉	Steel Casting 铸铁	Hot Blast Furnace 热风炉	Blast Furnace 热风炉	Hot Blast Furnace 热风炉



# Diatomite Insulating Brick

## 硅藻土隔热砖



Diatomite Insulating Brick is applied for the heat preservation of the liquid feeding pipe and equipment of electric power, metallurgy, machinery, chemical, and petroleum industries. It is also applied for the protection and insulation of high temperature heat treatment device such as electric oven, heater, steelmaking furnace, annealing furnace, glass kiln.

硅藻土隔热砖应用于液体输送管道和电力设备、冶金、机械、化工和石油行业的保温隔热。它也用于高温热处理设备，如电炉、炼钢炉、退火炉和玻璃窑的隔热保温。

Voluntary standards: GB/T 3996-2003。

执行标准

Standard Sizes (mm): 230×114×65, 250×123×65, 230×65/45×114, 230×65/55×114, 230×65/60×114

标准尺寸

### Technical Parameters

#### 技术参数

Items 项目	Model 型号	G0.4	G0.5	SG5	G0.6	SG6	G0.7a	G0.7	SG7	SG8	SG10
Bulk Density 密度	g/cm <sup>3</sup> ≥	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	1.0
Compressive Strength (Rm. T.) MPa 抗压强度	≥	0.8	0.8	1.2	0.8	1.5	2.5	1.2	2.5	5.0	8.0
Thermal Conductivity 300±10 °C 导热系数	≤	0.13	0.15	0.13	0.17	0.15	0.20	0.21	0.18	0.26	0.30
Reburning Linear Variation @900°Cx8h 重烧线变化	≤	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%



# Light Weight Mullite Insulating Brick

## 轻质莫来石耐火砖

It is the ideal material of furnace lining and insulation for the special furnace in metallurgy, petrochemical, glass and construction materials industries. It can be used in the insulation layer and the working lining on the position that in high temperature liquid melt might not erode.

轻质莫来石耐火砖是工业炉炉衬的理想耐火材料，也是冶金、石化、玻璃、建材行业特种窑炉的最佳隔热材料。它可以用于隔热层，以及工作区中高温熔融液体不容易腐蚀到的部位的炉衬。

### 1. General Model (refer to ASTM)

通用型号 (执行标准: ASTM)

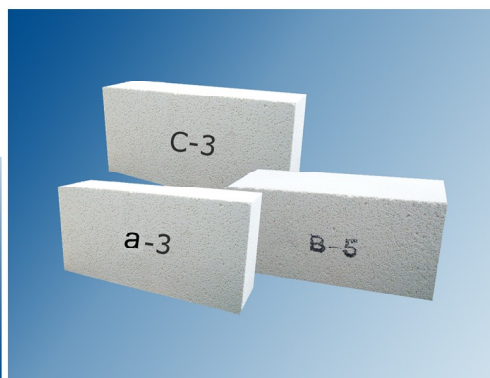
Items 项目	Model 型号	AM20	AM23	AM25	AM26	AM28	AM30	AM32
Classify Temperature 分类温度	°C	1230	1260	1350	1430	1540	1650	1760
Bulk Density 密度	g/cm <sup>3</sup>	0.52	0.58	0.8	0.8	0.89	1.03	1.25
Reburning Linear Variation 重烧线变化	% °C x hr	-0.1	-0.1	-0.5	-0.5	-0.8	-0.9	-0.9
		1230x24		1350x24	1400x24	1510x24	1620x24	1730x24
Rupture Strength 抗折强度	MPa	0.7	0.9	1.4	1.5	1.6	1.7	2.0
Compressive Strength 抗压强度	MPa (Rm. Temp. 室温)	1.2	1.2	2.5	2.4	2.6	2.8	3.4
Thermal Expansion 热膨胀系数	(R.T.-1000°C) % (室温-1000°C)	0.5	0.5	0.6	0.5	0.6	0.5	0.4
Thermal Conductivity 导热系数	400°C	0.17	0.17	0.24	0.24	0.30	0.4	0.49
	600°C	0.19	0.19	0.28	0.27	0.32	0.42	0.50
	800°C	0.22	0.22	0.32	0.30	0.35	0.44	0.51
	1000°C	0.24	0.25	0.37	0.32	0.38	0.45	0.53
	1200°C	-	-	-	0.35	0.39	0.47	0.55
Max. Working Temperature 最高工作温度	°C	1100	1100	1200	1300	1400	1500	1550
Chemical Composition 化学成分	Al <sub>2</sub> O <sub>3</sub>	45	45	45	55	65	72	76
	SiO <sub>2</sub>	50	50	50	42	33	26	22
	Fe <sub>2</sub> O <sub>3</sub>	0.7	0.7	0.65	0.60	0.30	0.30	0.30
	TiO <sub>2</sub>	1.3	1.2	1.3	1.1	0.9	0.5	0.3
	CaO+ MgO	0.5	0.7	0.6	0.3	0.2	0.3	0.2
	K <sub>2</sub> O+ Na <sub>2</sub> O	1.0	1.3	1.1	1.1	0.8	0.2	0.1



ASTM Mullite Insulating Brick



Brick for Blast Stove



JIS Series Mullite Insulating Brick

# Light Weight Mullite Insulating Brick

## 轻质莫来石耐火砖



Refractory | Thermal Ceramics 耐火材料|热陶瓷 □ Structural Ceramics 结构陶瓷 □ Minerals & Chemicals 矿产化工品 □ Machinery & Spare Parts 机械配件

### 2. Insulating Brick for Hot Blast Stove 热风炉用隔热砖

Items 项目	Model 型号	AM-E	AM-G	AM-H
Max. Working Temperature 最高工作温度	℃	1225	1300	1400
Bulk Density 密度	g/cm <sup>3</sup>	0.7	0.85	0.975
Compressive Strength 抗压强度 (Rm. Temp. 室温)	MPa ≥	1.5	1.8	2.5
Reburning Linear Variation 重烧线变化	% ℃ x hr	-1~0 1250x12	-1~0 1400x12	-1~0 1500x12
0.2MPa Intenerate Temp. under load 0.2MPa 下荷重软化温度	℃ ≥	1250	1350	1510
Thermal Conductivity 导热系数	20℃ ≤ W/m · k	0.17	0.25	0.38
	1000℃ ≤	0.30	0.40	0.48
Chemical Composition 化学成分	Al <sub>2</sub> O <sub>3</sub> ≥ Fe <sub>2</sub> O <sub>3</sub> ≤	35 1.5	42 1.0	55 1.0

### 3. General Products (Refer to JIS R2611-1976)

通用型号 (执行标准: JIS R2611-1976)

Series A A 系列								
Items 项目	Model 型号	A1	A2	A3	A4	A5	A6	A7
Bulk Density 密度	g/cm <sup>3</sup>	0.5	0.5	0.5	0.55	0.60	0.70	0.75
Temp. of Reburning Linear Variation <2% 重烧线变化 <2%的温度	℃	900	1000	1100	1200	1300	1400	1500
Compressive Strength (Rm. Temp.) MPa 抗压强度	≥	0.5	0.5	0.5	0.8	0.8	1.0	1.0
Thermal Conductivity @350℃ 热膨胀系数	W/m · k	0.13	0.14	0.15	0.16	0.17	0.20	0.22
Series B B 系列								
Items 项目	Model 型号	B1	B2	B3	B4	B5	B6	B7
Bulk Density 密度	g/cm <sup>3</sup>	0.7	0.70	0.75	0.80	0.80	0.90	1.00
Temp. of Reburning Linear Variation <2% 重烧线变化 <2%的温度	℃	900	1000	1100	1200	1300	1400	1500
Compressive Strength (Rm. Temp.) MPa 抗压强度	≥	2.5	2.5	2.5	2.5	2.5	3.0	3.0
Thermal Conductivity @350℃ 热膨胀系数	W/m · k	0.17	0.18	0.18	0.23	0.23	0.27	0.31
Series C C 系列								
Items 项目	Model 型号	C1		C2		C3		
Bulk Density 密度	g/cm <sup>3</sup>	1.1		1.2		1.3		
Temp. of Reburning Linear Variation <2% 重烧线变化 <2%的温度	℃	1300		1400		1500		
Compressive Strength (Rm. Temp.) MPa 抗压强度	≥	5.0		7.0		10.0		
Thermal Conductivity @350℃ 热膨胀系数	W/m · k	0.3		0.38		0.45		

# Mullite Insulating Brick

## 莫来石耐火砖



### ● Mullite Insulating Brick for Steelworks (SK-Series)

钢厂用莫来石绝热砖 (SK系列)

Items 项目	Model 型号	SK-32	SK-34	SK-36
Chemical Composition % 化学成分	Al <sub>2</sub> O <sub>3</sub> ≥	30	38	50
	Fe <sub>2</sub> O <sub>3</sub> ≤	3	2.5	2
Refractoriness 耐火度	SK	32	34	36
0.2MPa Intenerate Temp. under load °C ≥ 荷载软化温度		1300	1350	1450
Macro Porosity 显气孔率 %		22-26	19-23	20-24
Bulk Density 密度 g/cm <sup>3</sup> ≥		2.05	2.10	2.30
Compressive Strength (Rm. T.) 抗压强度(室温)MPa ≥		25	25	45
Thermal Expansion 热膨胀系数	R.T.-1000°C, %	0.6	0.6	0.3



SKSeries Mullite Insulating Bricks for Steelwork

SK系列钢厂用莫来石绝热砖



Low Creepage Mullite Brick for Hot Blast Stove

热风炉用低蠕变莫来石砖

### ● Low Creepage Mullite Brick for Hot Blast Stove

热风炉用低蠕变莫来石砖

Items 项目	Model 型号	H21	H22	H23	H24	H26	H27	H31	N41
Al <sub>2</sub> O <sub>3</sub> % ≥		75	80	65	65	60	50	55	--
Refractoriness 耐火度 °C ≥		1850	1850	1850	1820	1790	1770	1790	1750
Macro Porosity 显气孔率 % ≤		20	21	19	23	23	23	16	24
Bulk Density 密度 g/cm <sup>3</sup> ≥		2.6	2.7	2.45	2.4	2.3	2.2	2.45	2.15
Compressive Strength (R.T.) MPa ≥		≥55	≥45	≥45	≥45	≥40	≥40	≥68	≥30
Creeping Rate % ≤ 蠕变率 @0.2MPa x 50hr		0.8	0.8	0.8	0.8	0.8	0.8	--	0.8
		1550°C	1500°C	1450°C	1400°C	1300°C	1270°C		1250°C
Thermal Shock 热震 Time >		--	--	--	--	--	--	24 1100°C	--
Applicable Position 应用		Burning Chamber, Regenerator  燃烧室、 换热室	Mixing Chamber Regenerator 混合室、换 热室	hot-blast main, Regenerato 热风炉主 体、换热室	Burning Chamber, Regenerator 燃烧室、 换热室	Regenera -tor Lattice 格子体	Air inlet iron notch 进气口、出 铁口	Regenerat -or,air inlet 换热室、 进气口	

# High Alumina Brick

## 高铝砖

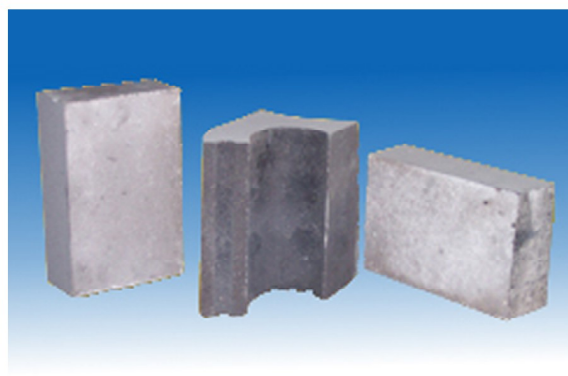
### ● High Alumina Brick

#### 高铝砖

Items 项目	Model 型号	GLA-70	GLA-65	GL-65	GL-55	GL-48
Chemical Composition % 化学成分	Al <sub>2</sub> O <sub>3</sub> ≥	70	65	65	55	48
	Fe <sub>2</sub> O <sub>3</sub> ≤	2	2	2	2	2
Refractoriness 耐火度	℃ ≥	1790	1790	1790	1770	1750
Macro Porosity 显气孔率	% ≤	19	19	19	19	18
Bulk Density 密度	g/cm <sup>3</sup> ≥	2.9	2.9	2.9	2.6	2.5
Compressive Strength (R.T.) 抗压强度 MPa ≥		60	60	58.8	49	49
0.2MPa Intenerate Temp. under load 荷软℃ ≥		1520	1520	1500	1480	1450
Reburning Linear Variation 重烧线变化	%	-0.2~0.0	0.0~0.4	-0.2~0.0	-0.2~0.0	-0.2~0.0
	℃ x hr	1500℃ x 2hr				1450℃ x 2hr
Thermal Shock Resistance 热震性	1100℃-Rm.T.	≥20 times	≥8 times	-	-	-
Applicable Position 应用		chill wall 墙	Stack, bosh, barrel, hearth 炉胸、炉腹、炉腰、炉床			



High Alumina Brick  
高铝砖



Phosphate Bonded High Alumina Brick  
磷酸盐结合高铝砖

### ● Phosphate Bonded High Alumina Brick (for Cement Kiln)

#### 水泥窑用磷酸盐结合高铝砖

Item 项目	Model 型号	P-75	P-77	P-85
Chemical Composition % 化学成分	Al <sub>2</sub> O <sub>3</sub> ≥	75	77	85
	Fe <sub>2</sub> O <sub>3</sub> ≤	3	3	2
	CaO ≤	0.6	0.6	0.6
Refractoriness 耐火度	℃ ≤	1770	1770	1790
0.2MPa Intenerate Temp. under load 荷软℃ ≥		1350	1300	1350
Bulk Density 密度	g/cm <sup>3</sup> ≥	2.65	2.70	2.80
Compressive Strength (R. T.) 抗压强度 MPa ≥		60	64	110
Application: Cement Rotary Kiln 应用: 水泥回转窑		High Temp. 高温区	High Abrasion Position 高腐蚀部	