



Refractory Brick

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.

Refractory Bricks

Material	Bricks		Applicable	Application	Reference
Al ₂ O ₃	Clay Brick		≤1400°C	Various industrial furnace and heat-treatment furnace	V- / N-
	Diatomite Insulating Brick		≤1000°C		Ng—
	Light Weight Mullite Insulating Brick		≤1600°C		JM23-32
	Mullite Insulating Brick for Steelworks		≤1450°C	Steel Blast Furnace, Foundry	JIS-A/B/C
	High Alumina Brick		≤1520°C	Industrial Furnace	SK-32/34/36
	Phosphate Bounded high Alumina Brick		≤1450°C	Cement Rotary Kiln	LZ-/HA-
	Corundum Brick	Corundum Brick	≤1800°C	Glass & Industrial Furnace	P-
		Chrome Corundum Brick	≤1650°C	Steel, Metallurgy, Building	GH-
Zircon Corundum Brick		≤1600°C	Steel, Metallurgy, Building		
SiC/SiO ₂	Clay Carborundum Brick		≤1450°C	Steel, Nonferrous Metallurgy	
	Light Weight Silica Brick		≤1400°C	Steel, Refractory Furnace	
Mg	Magnesite Brick		≤1550°C	Steel, Nonferrous Metallurgy	
	Magnesia Alumina Brick		≤1550°C	Steel, Metallurgy, Cement	
	Magnesia Calcium Brick		≤1550°C	Steel, Metallurgy	
	Magnesia Chrome Brick		≤1550°C	Steel, Metallurgy	
	Magnesia Carbon Brick		≤1550°C	Steel, Metallurgy	
	Magnesia Zirconium Brick		≤1450°C	Glass Furnace	
	Alumina Magnesia Carbon Brick		≤1550°C	Steel, Metallurgy	
	Magnesoferrite Brick		≤1500°C	Steel, Metallurgy, Cement	
	Forsterite Brick		≤1550°C	Glass Furnace	
ZrO ₂	Zirconia Brick		≤2200°C	Petrochemical, Refractory	

Please select suitable refractory brick according to the advice from professional technician and the following technical data.

● **Clay Brick**

Applied for the masonry of various industrial heat-treatment furnace, blast furnace, hot air oven and the bricks for molten steel casting. Voluntary standards: GB/3994-2005.



Items	Model	N20	N28J	N30	N36J	N36R	N40J	N40R	N42G	N42R
Al ₂ O ₃	% ≥	20	28	30	36	36	40	40	42	42
Fe ₂ O ₃	% ≤	--	--	--	--	--	2.0	2.0	1.7	1.5
Refractoriness	°C ≥	1670	1650	1670	1690	1690	1710	1730	1750	1750
0.2MPa Intenerate Temp. under load	°C ≥	1250	1250	1250	1300	1300	1320	1350	1430	1400
Reburning Linear Variation@1350°Cx2hr	≤	0.3%	0.1%	0.3%	0.1%	0.3%	0.3%	0.3%	--	--
Reburning Linear Variation@1450°Cx2hr	≤	0.4%	0.1%	0.4%	0.1%	--	--	--	0.3%	0.4%
Macro Porosity	% ≤	22	24	24	24	26	25	24	16	24
Compressive Strength (Room T.)	MPa ≥	20	20	20	20	20	22	24.5	50	29
Bulk Density	g/cm ³ ≥	1.3	1.8	1.9	2.0	2.0	2.2	2.2	2.3	2.3
Special Item by Measured Data		--	--	--	--	Thermal Shock	--	Thermal Shock	Air Permeability	Thermal Shock
Applicable Position*		G	J	G	J	R	J	R	H	R

*: Applicable Position -G: General Furnace, J: Steel Casting, R: Hot Blast Furnace, H: Blast Furnace

● **Diatomite Insulating Brick**

Applied for the heat preservation of the liquid feeding pipe and equipment of electric power, metallurgy, machinery, chemical, and petroleum industries. Also for the protection and insulation of high temperature heat treatment device such as electric oven, heater, steelmaking furnace, annealing furnace, glass kiln.

Voluntary standards: GB/T3996-2003.

Standard Sizes (mm): 230×114×65, 250×123×65,

230×65/45×114, 230×65/55×114, 230×65/60×114



Items	Model	G0.4	G0.5	SG5	G0.6	SG6	G0.7a	G0.7	SG7	SG8	SG10
Bulk Density	g/cm ³ ≥	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 ≥	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	≤	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	≤	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

● Light Weight Mullite Insulating Brick

It is the ideal material of furnace lining and insulation for the special furnace in metallurgy, petrochemical, glass and construction 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..

1. General Model (refer to ASTM)

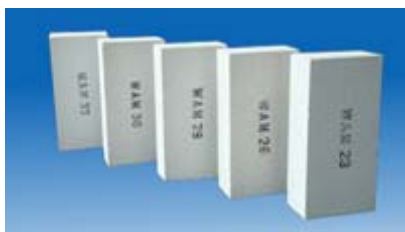
Items	Model	AM20	AM23	AM25	AM26	AM28	AM30	AM32
Classify Temperature	°C	1230	1260	1350	1430	1540	1650	1760
Bulk Density	g/cm ³	0.52	0.58	0.8	0.8	0.89	1.03	1.25
Reburning Linear Variation	%	-0.1	-0.1	-0.5	-0.5	-0.8	-0.9	-0.9
	°C x hr	1230x24		1350x24	1400x24	1510x24	1620x24	1730x24
Rupture Strength	MPa	0.7	0.9	1.4	1.5	1.6	1.7	2.0
Compressive Strength (Rm. Temp.)	MPa	1.2	1.2	2.5	2.4	2.6	2.8	3.4
Thermal Expansion	R.T.-1000°C, %	0.5	0.5	0.6	0.5	0.6	0.5	0.4
Thermal Conductivity W/m • k	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	°C	1100	1100	1200	1300	1400	1500	1550
Chemical Composition %	Al ₂ O ₃	45	45	45	55	65	72	76
	SiO ₂	50	50	50	42	33	26	22
	Fe ₂ O ₃	0.7	0.7	0.65	0.60	0.30	0.30	0.30
	TiO ₂	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 ₂ O+ Na ₂ O	1.0	1.3	1.1	1.1	0.8	0.2	0.1

2. Insulating Brick for Hot Blast Stove

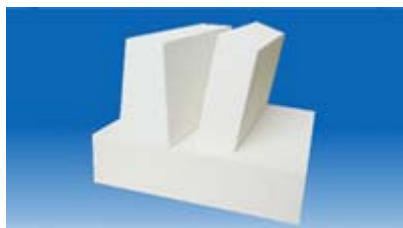
Items	Model	AM-E	AM-G	AM-H
Max. Working Temperature	°C	1225	1300	1400
Bulk Density	g/cm ³	0.7	0.85	0.975
Compressive Strength (Rm. Temp.)	MPa ≥	1.5	1.8	2.5
Reburning Linear Variation	%	-1~0	-1~0	-1~0
	°C x hr	1250x12	1400x12	1500x12
0.2MPa Intenerate Temp. under load	°C ≥	1250	1350	1510
Thermal Conductivity W/m • k	20°C ≤	0.17	0.25	0.38
	1000°C ≤	0.30	0.40	0.48
Chemical Composition %	Al ₂ O ₃ ≥	35	42	55
	Fe ₂ O ₃ ≤	1.5	1.0	1.0

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

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



AM Series Light Weight Insulating Brick



Insulating Brick for Hot Blast Stove



JIS-A/B/C Series Insulating Brick

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

Items	Model	SK-32	SK-34	SK-36
Chemical Composition %	Al ₂ O ₃ ≥	30	38	50
	Fe ₂ O ₃ ≤	3	2.5	2
Refractoriness	SK	32	34	36
0.2MPa Intenerate Temp. under load	°C ≥	1300	1350	1450
Macro Porosity	%	22-26	19-23	20-24
Bulk Density	g/cm ³ ≥	2.05	2.10	2.30
Compressive Strength (Rm. T.)	MPa ≥	25	25	45
Thermal Expansion	R.T.-1000°C, %	0.6	0.6	0.3



● High Alumina Brick

Items		Model	GLA-70	GLA-65	GL-65	GL-55	GL-48
Chemical Composition %	Al ₂ O ₃	≥	70	65	65	55	48
	Fe ₂ O ₃	≤	2	2	2	2	2
Refractoriness	°C	≥	1790	1790	1790	1770	1750
Macro Porosity	%	≤	19	19	19	19	18
Bulk Density	g/cm ³	≥	2.9	2.9	2.9	2.6	2.5
Compressive Strength (Rm. T.)	MPa	≥	60	60	58.8	49	49
0.2MPa Intenerate Temp. under load	°C	≥	1520	1520	1500	1480	1450
Reburning Linear Variation	%	°C x hr	-0.2~0.0	0.0~0.4	-0.2~0.0	-0.2~0.0	-0.2~0.0
			1500°Cx2hr				
Thermal Shock Resistance	1100°C		20	8	-	-	-
water cooling	Times	≥					
Applicable Position			chill wall	Stack, bosh, barrel, hearth			



High Alumina Brick



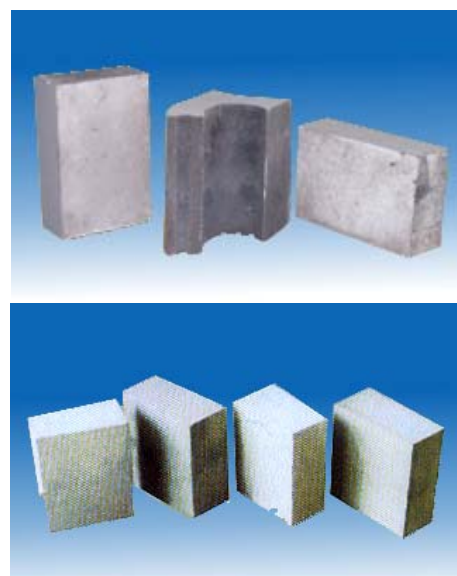
Low Creepage Mullite Brick for Hot Blast Stove

Low Creepage Mullite Brick for Hot Blast Stove

Items		Model	H21	H22	H23	H24	H26	H27	H31	N41
Al ₂ O ₃ %		≥	75	80	65	65	60	50	55	--
Refractoriness	°C	≥	1850	1850	1850	1820	1790	1770	1790	1750
Macro Porosity	%	≤	20	21	19	23	23	23	16	24
Bulk Density	g/cm ³	≥	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	%	≤	0.8	0.8	0.8	0.8	0.8	0.8	--	0.8
			@0.2MPa x 50hr	1550°C	1500°C	1450°C	1400°C	1300°C	1270°C	
Thermal Shock	Time	>	--	--	--	--	--	--	24 1100°C	--
Applicable Position			Burning Chamber, Regenerator	Regenerator Burning Chamber	Mixing Chamber, Regenerator	hot-blast main, Regenerator	Burning Chamber, Regenerator	Regenerator lattice	Air inlet iron notch	Regenerator air inlet

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

Item		Model	P-75	P-77	P-85
Chemical Composition %	Al ₂ O ₃	≥	75	77	85
	Fe ₂ O ₃	≤	3	3	2
	CaO	≤	0.6	0.6	0.6
Refractoriness		°C ≤	1770	1770	1790
0.2MPa Intenerate Temp. under load		°C ≥	1350	1300	1350
Bulk Density		g/cm ³ ≥	2.65	2.70	2.80
Compressive Strength (RoomT.)		MPa ≥	60	64	110
Application: Cement Rotary Kiln			High Temp Position	High Abrasion Position	

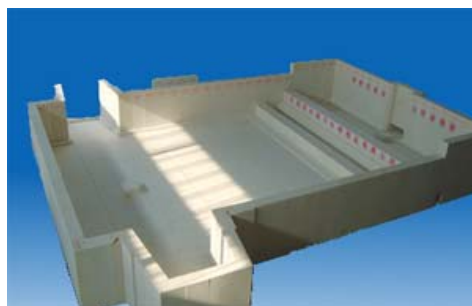


● **Corundum Brick, Zircon Corundum Brick, Chrome Corundum Brick**

Item		Model	Corundum Brick			Zircon Corundum Brick				Cr-Corundum
			HC98	HC90	HC85	ZC40	ZC36	ZC30	ZC20	CC10
Chemical Composition %	Al ₂ O ₃	≥	98.5	90	85	43	47	48	50	85-90
	Fe ₂ O ₃	≤	0.15	1.0	1.2	0.3	0.3	0.5	0.8	-
	ZrO ₂	≥	-	-	-	40	36	30	20	3
	Cr ₂ O ₃	-	-	-	-	-	-	-	-	10-5
Refractoriness		°C ≥	1850	1790	1790					1825
Macro Porosity		% ≤	18	18	20	16	16	16	18	18
Bulk Density		g/cm ³ ≥	3.9	3.6	3.2	3.9	3.75	3.3	2.9	3.2
Compressive Strength (RT.)		MPa	≥250	≥240	≥230	≥350	≥350	≥350	≥350	≥350
Intenerate Temp. under load		°C	≥1700	≥1650	≥1600	≥1700	≥1650	≥1650	≥1520	≥1680
Max. Working Temp.		°C ≤	170	1650	1600	1700	1600	1600	1500	1650
Applicable Position			Gasification Furnace, Gas Generator, Charcoal Black Reactor for petrochemical industries			Glass molten pool, regenerator, Ceramic frit kiln General Casting: molten pool, Incline Casting: tank wall, Non-shrinkage Casting: high eroding position				Reaction furnace, high Temp. kiln



Corundum Brick



Zircon Corundum Brick



Chrome Corundum Brick

● Clay Carborundum Brick

Items	Model	SC85	SC75
Chemical Composition %	SiC \geq	85	75
0.2MPa Intenerate Temp. under load $^{\circ}\text{C} \geq$		1600	1500
Bulk Density	$\text{g/cm}^3 \geq$	2.5	2.4
Compressive Strength (Rm. Temp.)	MPa \geq	75	55
Thermal Shock 1100 $^{\circ}\text{C}$ -R. T.	Times \geq	35	25
Application	High Temperature Parts, Setter Plate, Flame clapboard for Steel and non-ferrous metal smelting furnace		



● Light Weight Silica Brick

Items	Model	S10	S11	S115	S12
Chemical Composition %	SiO ₂ \geq	91	91	91	91
Bulk Density	$\text{g/cm}^3 \geq$	1.0	1.1	1.15	1.2
Reburning Linear Variation 1550 $^{\circ}\text{C}$ x2hr	% \leq	—	—	0.5	0.5
Reburning Linear Variation 1450 $^{\circ}\text{C}$ x2hr	% \leq	0.5	0.5	—	—
Compressive Strength (Room. Temp.)	MPa \geq	2	3	5	5
Thermal Conductivity @350 $^{\circ}\text{C}$	W/m · k \leq	0.55	0.60	0.65	0.70
0.1MPa Intenerate Temp. under load $^{\circ}\text{C} \geq$		1400	1420	1500	1520



● Electrocast Magnesite Brick

High strength, high temperature resistance, good erosion resistance and slag resistance. Mainly applied for steel-making convertor, EAF, glass furnace and nonferrous furnace.

Items	Model	FM98	FM97	FM96	FM95	FMZ98	FMZ97	FMZ96	FMZ95	FMZ92
Chemical Composition %	MgO \geq	98	97	96	95	98	97	96	95	92
	SiO ₂ \leq	0.5	0.5	0.6	1.0	0.5	0.6	0.9	1.5	3.5
	Fe ₂ O ₃ \leq	0.3	0.4	0.6	0.7	0.3	0.3	0.6	0.7	1.4
	CaO \leq	0.9	1.2	1.3	1.8	0.6	0.7	1.0	1.5	1.8
	Al ₂ O ₃ \leq	0.2	0.2	0.2	1.8	0.2	0.2	0.2	0.3	1.0
Compressive Strength (R.T.)	MPa \geq	70	70	65	65	70	70	65	65	70
Macro Porosity	% \leq	16	16	17	18	16	16	16	17	17
Bulk Density	$\text{g/cm}^3 \geq$	3.1	3.0	3.0	2.98	3.1	3.0	2.98	2.98	2.95
0.1MPa Intenerate Temp. under load $^{\circ}\text{C} \geq$		1700	1700	1680	1650	1700	1700	1680	1650	1580
Thermal Shock 950 $^{\circ}\text{C}$	Times \geq	25	25	25	20	20	20	20	15	15

● **Magnesia Alumina Brick (Magnesia Alumina Spinel)**

Magnesia Alumina Brick is with good thermal shock resistance, good mechanical strength in high temperature, high softening temperature under load, good slag resistance. It is used in nonferrous smelt, front-after transition zone of cement kiln, high temperature zone of limekiln, regenerator of glass furnace, reverberator arch.

Items	Model	ML80A	ML80B	ML85A	ML85B
Chemical Composition %	MgO ≥	80	80	85	85
	Al ₂ O ₃ ≤	5-10	5-10	4-8	4-8
Compressive Strength (Room. Temp.) MPa ≥		40	35	45	40
Macro Porosity % ≤		18	20	18	19
Bulk Density g/cm ³ ≥		3.0	3.0	3.1	3.1
0.2MPa Intenerate Temp. under load °C ≥		1600	1580	1650	1630
Thermal Shock Resistance 950°C Time ≥		3	3	3	3

Periclase spinel brick is produced from high quality dead burnt magnesite and sintered magnesia alumina spinel sand by special formula, press moulding and high temperature firing. With excellent volume stability and thermal shock stability in high temperature, the good thermal resistance, eroding resistance and spall resistant properties, it is widely used in the big dry cement rotary kiln.

Periclase bonded spinel brick is with good volume stability, Intenerate Temp. upto 1740°C, good thermal shock resistance, easily bonded to kiln wall, much better than magnesia chrome brick. It is used on the firing zone and transition band of cement kiln.

		Periclase Spinel Brick					Periclase Bonded Spinel Brick			
Items	Model	MA85A	MA85B	MA80	MA75A	MA75B		MJ75	MJ78	MJ75F
Chemical Composition %	MgO ≥	85	82	80	75	75	Cr ₂ O ₃	75	78	75
	SiO ₂ ≤	0.6	2.5	1.5	0.6	1.0		1.0	1.4	1.4
	Fe ₂ O ₃ ≤	0.7	0.7	0.8	0.8	0.8		2-4	2-4	2-4
	CaO ≤	12	12	9	13	13		-	-	-
	Al ₂ O ₃ ≤	1.2	1.2	1.2	1.0	1.0		-	-	-
Compressive Strength(R.T.) MPa		≥45	≥40	≥45	≥45	≥45		≥50	≥50	≥60
Macro Porosity % ≤		17	16	16	17	17		17	17	17
Bulk Density g/cm ³ ≥		2.95	2.95	2.95	2.95	2.95		3.0	3.0	3.0
0.2MPa Intenerate T. °C ≥		1700	1700	1700	1700	1700		1700	1700	1700
Thermal Shock 1000°C ≥		12	10	10	10	10		12	8	12



● Magnesia Calcium Brick (Magnesite-Dolomite Brick)

With properties of high strength, high temperature resistance, cauterization resistance, helpful to increase molten steel purity, Magnesia Calcium Brick is applied to stainless steel converter, container, VOD, AOD.

Items Model	Chemical Index %					Physical Index			
	CaO ≥	MgO ≥	Fe ₂ O ₃ ≤	SiO ₂ ≤	Al ₂ O ₃ ≤	Compressive Strength (R.T.) MPa	Macro Porosity	Bulk Density g/cm ³	0.2MPa Intenerate Temp.
MCa30	30	67	0.7	1.0	0.5	≥80	≤6%	≥3.0	≥1700°C
MCa20	20	77	0.7	1.4	0.7	≥80	≤6%	≥3.0	≥1700°C



Magnesia Calcium Brick



Magnesia Chrome Brick



Non-fired Magnesia Chrome Brick

● Magnesia Chrome Brick

1. Magnesite Chrome Brick

With excellent thermal stability and etching resistance, it is used in firing zone of dry cement kiln, glass kiln, non-ferrous converter and refining reverberator.

Items Model	Chemical index %						Physical Index			
	MgO ≥	Cr ₂ O ₃ ≥	SiO ₂ ≤	Al ₂ O ₃ ≤	Fe ₂ O ₃ ≤	CaO ≤	Compressive Strength MPa	Macro Porosity	Density g/cm ³ ≥	0.2MPa Intenerate Temp.
MCr16	65	16	1.8	5.0	8.0	1.5	≥55	≤17%	3.15	≥1700°C
MCr14	70	14	1.6	4.5	7.0	1.5	≥55	≤17%	3.15	≥1700°C
MCr12	75	12	1.5	4.5	6.0	1.7	≥55	≤17%	3.10	≥1700°C
MCr10	75	10	1.5	4.0	5.0	1.7	≥50	≤18%	3.00	≥1650°C
MCr08	75	8	4.0	3.5	4.5	1.8	≥45	≤18%	3.00	≥1650°C
MCr06	75	6	4.0	3.0	4.0	2.0	≥40	≤18%	3.00	≥1650°C

2. Non-fired Magnesite Chrome Brick

With high strength, slag resistance, thermal stability, it is used for cement kiln and copper reverberator.

Items Model	Chemical Index %						Physical Index			
	MgO ≥	Cr ₂ O ₃ ≥	SiO ₂ ≤	Al ₂ O ₃ ≤	Fe ₂ O ₃ ≤	CaO ≤	Compressive Strength MPa	Macro Porosity	Density g/cm ³ ≥	0.2MPa Intenerate Temp.
MCrN12	66	12	5	7	7	1.5	≥50	≤17%	3.1	≥1560°C
MCrN10	69	10	5	6	7	1.8	≥45	≤17%	3.05	≥1550°C

MCrN08	72	8	5	5	6	2.0	≥ 45	$\leq 17\%$	3.0	$\geq 1540^\circ\text{C}$
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3. Semi-re-bonded Magnesia Chrome Brick

With high strength, good etching resistance and anti scour property, good slag resistance and thermal shock resistance, it is used for smelting furnace, steel EAF, converter, AOD furnace, VOD furnace and refining container. It is applied for the air hole, slag line, trunion and exit in metallurgy and non-ferrous furnace.

Items Model	Chemical Index %						Physical Index			
	MgO \geq	Cr ₂ O ₃ \geq	SiO ₂ \leq	Al ₂ O ₃ \leq	Fe ₂ O ₃ \leq	CaO \leq	Compressive Strength MPa \geq	Macro Porosity \leq	Density g/cm ³ \geq	0.2MPa Intenerate Temp. \geq
MCrH22	57	22	1.2	7.0	8.5	1.5	≥ 50	$\leq 17\%$	3.3	$\geq 1750^\circ\text{C}$
MCrH20	60	20	1.2	7.0	7.0	1.5	≥ 55	$\leq 17\%$	3.2	$\geq 1750^\circ\text{C}$
MCrH18	63	18	1.2	6.5	7.5	1.5	≥ 55	$\leq 17\%$	3.15	$\geq 1750^\circ\text{C}$
MCrH16	66	16	1.2	6.0	7.0	1.5	≥ 60	$\leq 18\%$	3.05	$\geq 1700^\circ\text{C}$
MCrH14	70	14	1.2	5.0	6.0	1.5	≥ 65	$\leq 18\%$	3.05	$\geq 1700^\circ\text{C}$

4. Re-bonded Magnesia Chrome Brick

With high strength, good anti scour property, thermal resistance, good slag resistance, it is used in execrable working conditions, such as steel EAF, converter, AOD furnace, RH furnace and refining steel container.

Items Model	Chemical Index %						Physical Index			
	MgO \geq	Cr ₂ O ₃ \geq	SiO ₂ \leq	Al ₂ O ₃ \leq	Fe ₂ O ₃ \leq	CaO \leq	Compressive Strength MPa \geq	Macro Porosity \leq	Density g/cm ³ \geq	0.2MPa Intenerate Temp. \geq
MCrF26	50	26	1.2	8.0	9.0	1.2	≥ 50	$\leq 17\%$	3.35	$\geq 1750^\circ\text{C}$
MCrF24	55	24	1.2	7.5	9.0	1.0	≥ 60	$\leq 17\%$	3.30	$\geq 1750^\circ\text{C}$
MCrF22	57	22	1.2	7.0	8.5	1.2	≥ 50	$\leq 17\%$	3.30	$\geq 1750^\circ\text{C}$
MCrF20	62	20	1.2	7.0	8.0	1.0	≥ 60	$\leq 17\%$	3.20	$\geq 1750^\circ\text{C}$
MCrF18	63	18	1.2	6.5	7.5	1.2	≥ 60	$\leq 17\%$	3.20	$\geq 1700^\circ\text{C}$
MCrF16	66	16	1.5	6.0	7.0	1.5	≥ 60	$\leq 17\%$	3.10	$\geq 1700^\circ\text{C}$



Semi-Re-Bonded Magnesia Chrome Brick



Re-Bonded Magnesia Chrome Brick

● **Magnesia Carbon Brick**

It is produced by high quality fused magnesia and scale graphite, with thermosetting phenolic resin as matrix, adding suitable antioxidant according to different application, and apply reasonable granularity gradation, then mould under high pressure above 1000 MT. This product is with good thermal resistant property, good oxidation resistance and alkaline slag resistance properties. According to different position of the furnace lining, we can use suitable model of magnesia carbon brick, then we can reduce the cost of the refractories of the whole kiln liner, and achieve the uniform etching of each position.

Magnesia Carbon Brick for Electric Furnace

Items Model	Chemical Index %		Physical Index			
	MgO ≥	F.C ≥	Compressive Strength MPa	Macro Porosity %	Bulk Density g/cm ³	Rupture Strength in high Temp 1400°C 30min MPa
MC14	76	14	≥35	≤3	≥2.98	≥12
MC12	78	12	≥40	≤3	≥3.00	≥12
MC10A	83	10	≥40	≤4	≥3.02	≥6
MC10B	80	10	≥40	≤4	≥3.02	≥14

Magnesia Carbon Brick for Converter

Items Model	Chemical Index %		Physical Index			
	MgO ≥	F.C ≥	Compressive Strength MPa	Macro Porosity %	Bulk Density g/cm ³	Rupture Strength in high Temp 1400°C 30min MPa
MC16	74	16	≥35	≤3	≥2.96	≥10
MC14A	78	14	≥40	≤4	≥3.00	≥12
MC14B	76	14	≥35	≤3	≥2.98	≥12
MC12	78	12	≥40	≤3	≥3.00	≥12
MC10A	83	10	≥40	≤4	≥3.02	≥6
MC10B	80	10	≥40	≤4	≥3.02	≥14



Magnesia Carbon Brick for Electric Furnace



Magnesia Carbon Brick for Converter

● Magnesia Zirconium Brick

It is used for regenerator latticework in glass kiln and metallurgy furnace.

Items Model	Chemical Index %		Physical Index				
	MgO ≥	ZrO ₂ ≤	Compressive Strength MPa ≥	Macro Porosity % ≤	Density g/cm ³ ≥	0.2MPa Intenerate Temp. ≥	Thermal Shock time 1100°C ~ Room T. ≥
MZ08	75	8	≥50	≤19	2.98	≥1600°C	≥10
MZ10	75	10	≥45	≤18	2.98	≥1550°C	≥10
MZ13	70	13	≥40	≤18	3.00	≥1550°C	≥10

● Alumina Magnesia Carbon Brick

It is produced from high quality bauxite, corundum, fused magnesia and scale graphite, along with spinel and metal antioxidant, combined with phenolic resin, mould under high pressure above 800MT. With high bulk density, high strength in room temperature and high temperature, steel scouring resistance, it is used on the wall and bottom of the steel container and refining steel container.

Items Model	Chemical Index %			Physical Index			
	MgO ≥	F. C ≥	Al ₂ O ₃ ≥	Macro Porosity % ≤	Density g/cm ³ ≥	Compressive Strength MPa ≥	Rupture Strength in high T. MPa 1400°C 30min ≥
MCA55	28	8	55	≤6	3.15	≥55	≥14
MCA60A	20	8	60	≤6	3.10	≥50	≥14
MCA60B	15	6	60	≤8	2.97	≥50	≥8
MCA70	10	8	70	≤7	3.06	≥50	≥14
MCA75	10	8	75	≤6	3.15	≥55	≥14

● Magnesoferrite Brick

With good etching resistance, spall resistant and thermal resistance, it is used in big dry cement kiln.

Items Model	Chemical Index %				Physical Index					
	MgO ≥	SiO ₂ ≤	Fe ₂ O ₃ ≤	Al ₂ O ₃ ≤	Compressive Strength MPa ≥	Macro Porosity % ≤	Density g/cm ³ ≥	0.2MPa Intenerate Temp. °C ≥	Thermal Shock 1100°C-R. T. ≥	Thermal Conductivity W/MK ≥
MFe85	85	0.9	7.5	3	50	17	3.0	≥1660	≥10	≥2.5
MFe80	80	0.9	7.5	3	45	17	2.9	≥1630	≥10	≥2.5



Magnesia Zirconium Brick



Alumina Magnesia Carbon Brick



Magnesoferrite Brick

● **Forsterite Brick**

It is produced by natural forsterite through high pressure moulding and high temperature firing. With good thermal properties and alkaline etching resistance, it is used on regenerator latticework and wall in glass kiln.

Items Model	Chemical Index %				Physical Index					
	MgO ≥	SiO ₂ ≤	Fe ₂ O ₃ ≤	CaO ≤	Compressive Strength MPa ≥	Macro Porosity % ≤	Density g/cm ³ ≥	0.2MPa Intenerate Temp. °C	Thermal Shock 1100°C-R. T.	Reburning Linear Variation 1650°C*2h
MS65	65	25	6	1.0	45	17	2.95	≥1700	≥10	+0.1%
MS70	70	22	5	1.1	45	17	2.95	≥1700	≥10	+0.1%



Forsterite Brick



Fusion Casting Zirconia Brick

● **Fusion Casting Zirconia Brick**

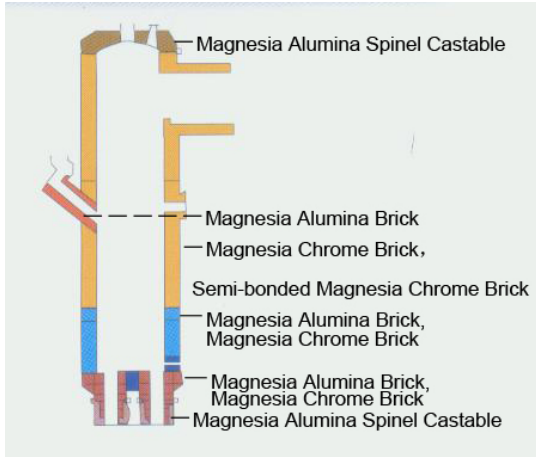
It is produced by Zirconia (ZrO₂≥98%) and stabilizer, through mix, electrocast, die casting, cooling process.

With low porosity, high compact, high mechanical strength, good glass eroding resistance, it is used in galss kiln to increase the fusion temperature, decrease the pollution from the refractory to the glass, improve the glass quality and prolong the working life of the glass kiln.

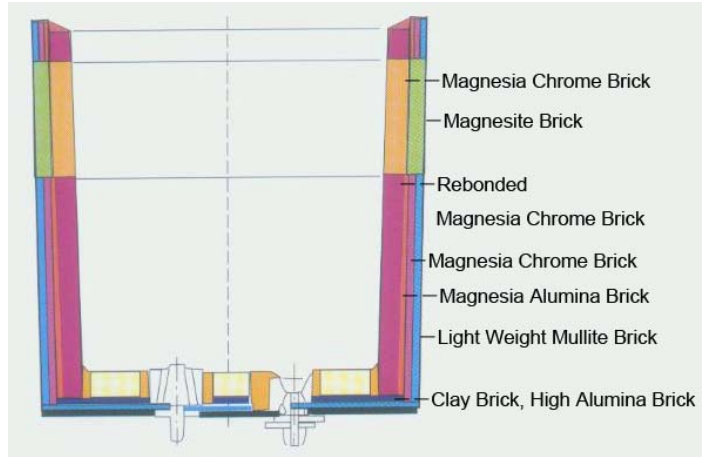
Chemical and Physical Parameters

Items	Index	Items	Index
ZrO ₂ + Stabilizer %	98.5	Compressive Strength in Rm. Temp. MPa	360
SiO ₂ %	0.2	Rupture Strength in Rm.Temp. MPa	80
Fe ₂ O ₃ %	0.25	Thermal Conductivity (0-1000°C) W/MK	1.7-2.3
Macro Porosity %	0.8	Linear Expansivity 1000°C %	0.6-0.8
Bulk Density g/cm ³	>4.80		
0.2MPa Intenerate Temp. °C	1800	Working Temperature °C	2200

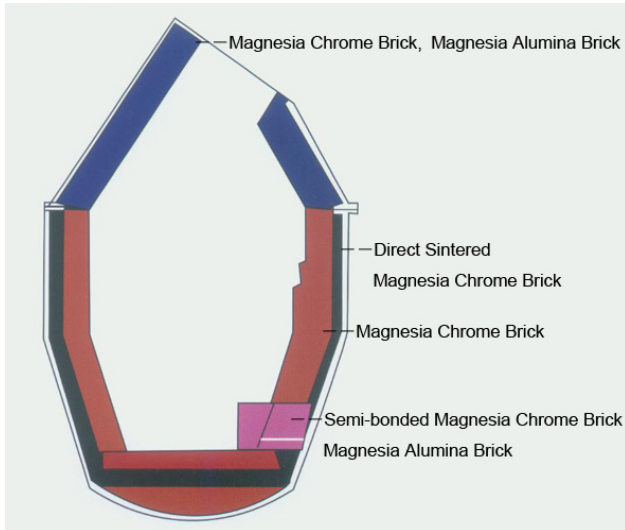
● **Example of Application**



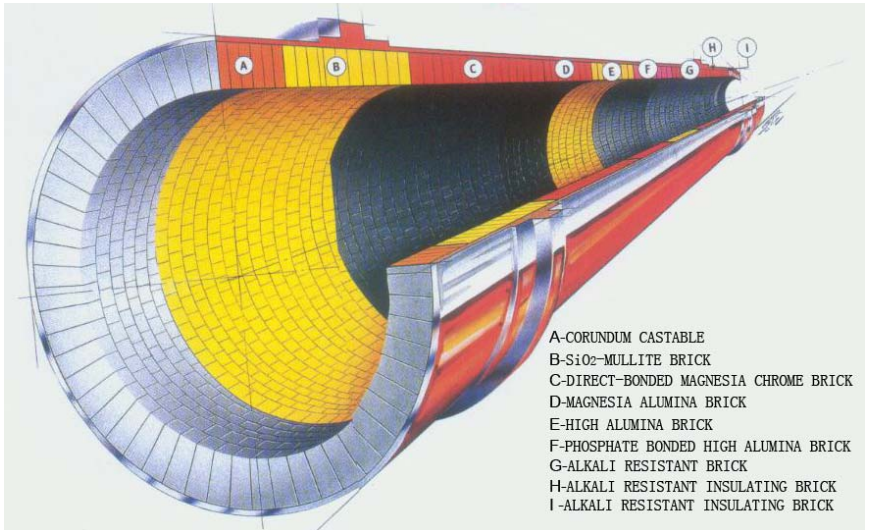
RH Refining Furnace



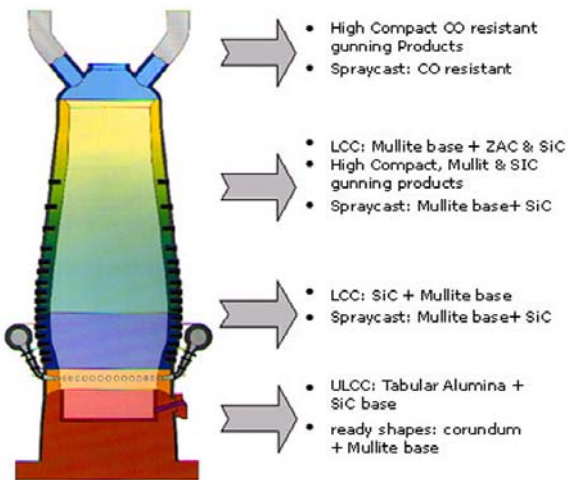
VOD Refining Furnace



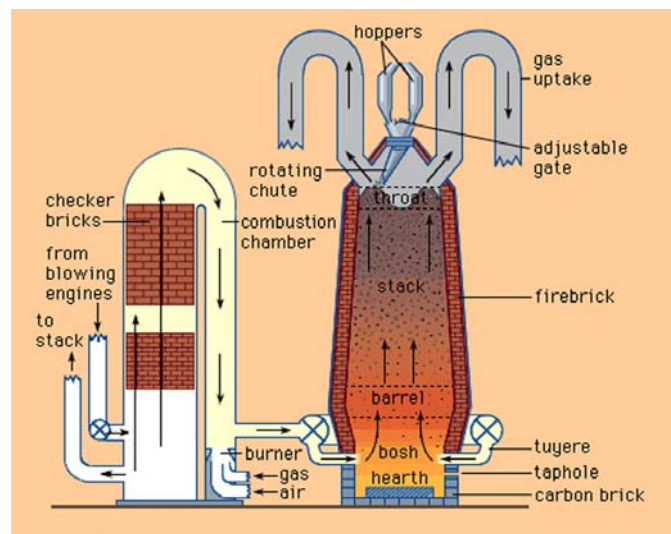
AOD Refining Furnace



Cement Kiln



Blast Furnace Drawing 1



Blast Furnace Drawing 2

For more details, please feel free to contact us.

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