



## THE QUALITY OF BASIC BRICKS

Kuan-Ho is the only manufacturer to produce various high quality basic brick in Taiwan. Cement and steel industries are the two major consumer of our basic bricks.

Magnesia, chrome, magnesia chrome and chrome-magnesia are all basic bricks in which magnesia-chrome is the most widely used refractories. The raw materials used are dead burned magnesia oxide either from natural ore or sea water magnesia and carefully selected low silica chromite. In addition to grain-size control, green bricks are molded under pressure by a 1500MT hydraulic molding press and burned at 1850°C in a super-high temperature tunnel kiln. The excellent characteristics of magnesia-chrome

bricks make them most suitable for pyroprocessing industries such as cement and steel.

Basic bricks can be classified as:

- High or super-high burned Mg-Cr. Bricks: direct bonded.
- Ordinarily burned Mg-Cr bricks: silicate bonded.
- Unburned Mg-Cr bricks: Chemical bonding, plain or oncased.

Their characteristics might be summerized as:

- High refractoriness and refractoriness under load.
- High mechanical strength and low porosity.
- Good resistance to basic slags and fused metals corrosion.
- Good resistance to abrasion and thermal shock.

### Typical Properties

Brand		SUPER HIGH BURNED AND HIGH BURNED				
		ND-8	RH-1	RD-10	D-AS(AS-98%)	AMC-KB1
Refractoriness(SK)		> 40	> 40	> 40	> 40	> 40
Apparent Porosity(%)		13.5	15.5	14	14	4.0
Bulk Density(g/cm <sup>3</sup> )		3.05	3.20	3.37	3.05	2.65
Cold Crushing Strength (Mpa)		45.0	55.0	72.0	80.0	56.0
Refractoriness under load (T <sub>2</sub> °C)Load:2kgf/cm <sup>2</sup>		> 1650	> 1650	> 1650	> 1650	> 1650
Permanent Linear Change (%) 1500°C -2hrs		0.25	0.5	0.5	0.3	0.3
Thermal Expansion (%) at 1000°C		< 1.25	< 1.2	< 1.2	< 1.5	< 1.4
Chemical Composition(%)	MgO	77.0	60.0	60.4	98.1	12
	Cr <sub>2</sub> O <sub>3</sub>	9.8	20.0	12.5	—	15.1
	Al <sub>2</sub> O <sub>3</sub>	4.5	—	—	—	69
Characteristics		Direct bond	Corrosion resistance	Rebond	High purity	High purity
Main Application		Rotary kiln etc.	Refining furnace	Refining furnace	Hot-Metal Mixer etc.	Hot-Metal Mixer etc.



# KUAN-HO REFRACTORIES INDUSTRY CORPORATION

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## Typical Properties

Brand		ORDINARY BURNED					
		MB-8	MB-10	AS-92%	MB-7	MB-5	CM-5
Properties							
Refractoriness(SK)		> 40	> 40	> 40	> 40	> 38	> 38
Apparent Porosity(%)		22	18	16	16	18	21
Bulk Density(g /cm <sup>3</sup> )		2.85	2.85	2.90	3.01	3.10	3.10
Cold Crushing Strength (Mpa)		35.0	72.0	65.0	43.0	34.2	34.0
Refractoriness under load (T <sub>2</sub> °C)Load:2kgf/cm <sup>2</sup>		> 1500	> 1550	> 1550	> 1500	> 1500	> 1500
Permanent Linear Change (%) 1500°C -2hrs		< +0.3	< +0.2	< +0.6	< +0.4	< +0.5	< +0.5
Thermal Expansion(%) at 1000°C		< 1.2	< 1.4	< 1.4	< 1.1	< 0.9	< 1.1
Chemical Composition(%)	MgO	72.0	95.2	91.5	70.0	59.6	49.0
	Cr <sub>2</sub> O <sub>3</sub>	—	—	—	9.1	19.8	20.5
Characteristics		High purity	High purity	—	—	—	—
Main Application		Lime kiln etc.	Lime kiln etc.	Hot-Metal Mixer etc.	Cement kiln etc.	Glass furnace etc.	Glass furnace etc.