KUAN-HO REFRACTORIES INDUSTRY CORPORATION
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The TCC Group
THE FUTURE IS WORTH IT

THE QUALITY OF HARD AND SPECIAL FIRECLAY BRICKS

Hard or special fireclay bricks might be selected to substitute the general fireclay bricks in case the later can't satisfy the requirements in service.
Hard fireclay bricks are made of high purity materials, high pressure molded and adequately fired. They are distinguished from general fireclay bricks as:

- Higher density brick and mechanical strength.
- Lower porosity and thermal expansion.
- Higher Al_2O_3 % and refractoriness.
- Good resistance to wear, thermal shock, spalling and creep deformation.

Different from general and hard fireclay bricks, special fireclay bricks are prepared for specific purposes. For instance, extremely high wear resistance is leading requirement for a cement cooler.

Typical Properties

Brand / Properties		FC-SD	FC-6D	FC-5D	FC-4D
Refractoriness(SK)		＞35	＞34	＞33	＞32
Apparent Porosity(%)		14.0	16.5	17.0	17.5
Bulk Density(g /cm^3)		2.35	2.30	2.25	2.20
Cold Crushing Strength (kgf /cm^2)		750	500	450	400
Refractoriness under load (T_2℃)Load:2kgf/cm^2		＞1480	＞1450	＞1430	＞1400
Permanent Linear Change (%) –2hrs		1450ºC −0.5 ~ +0.2	1400ºC −0.5 ~ +0.2	1400ºC −0.6 ~ +0.2	1300ºC −0.6 ~ +0.2
Thermal Expansion (%) at 1000ºC		＜0.75	＜0.65	＜0.6	＜0.6
Chemical Composition(%)	Al_2O_3	49.7	45.7	43.2	41.2
	Fe_2O_3	1.4	1.6	1.7	2.0
Characteristics		Low porosity	Low porosity	Low porosity	Low porosity
Main Application		Blast furnace Rotary kiln etc.	Blast furnace Rotary kiln etc.	Blast furnace Rotary kiln etc.	Blast furnace Rotary kiln etc.

Brand / Properties		FC-6C	FC-5C	FC-4C
Refractoriness(SK)		＞34	＞33	＞32
Apparent Porosity(%)		19	19	20
Bulk Density(g /cm^3)		2.25	2.20	2.15
Cold Crushing Strength (kgf /cm^2)		400	400	350
Refractoriness under load (T_2C)Load:2kgf/cm^2		＞1420	＞1350	＞1350
Permanent Linear Change (%) –2hrs		1400ºC −0.6 ~ +0.2	1350ºC −0.6 ~ +0.2	1300ºC −0.6 ~ +0.2
Thermal Expansion (%) at 1000ºC		＜0.65	＜0.65	＜0.6
Chemical Composition(%)	Al_2O_3	44.5	43.0	41.0
	Fe_2O_3	1.8	1.9	2.0
Characteristics		Creep resistance	Creep resistance	Creep resistance
Main Application		Hot-blast stoves etc.	Hot-blast stoves etc.	Hot-blast stoves etc.