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

THE QUALITY OF PLASTIC REFRACTORIES

Plastic refractories are mixtures of refractory materials prepared in stiff plastic condition for application without further preparation. They are of two types, one is a blend slice of fireclay or alumina materials, and wrapped with moisture proof packing material to preserve the moisture content. The other, mostly basic materials is stored in sealed drums.

Generally they are rammed into place with pneumatic hammers or pounded with mallet by hand. When using such plastic refractories, the damaged surface should be kept clean and rough to ensure a firm bonding of the surface with plastic refractories. Cut the covered surface with ditches at about equal distance as an allowance for thermal expansion in case the surface is too large in size. They have many advantages similar to castables. The most distinct one is that brick failure at the joints disappear forever since the structure is now joint-free.

Typical Properties

Brand / Properties		PL-180	PL-175H	PL-175	PL-170	PL-165H	PL-165
Max. Service Temperature(℃)		1800	1750	1750	1700	1650	1650
Quantity Required(kg/m^3)		2900	2800	2600	2500	2300	2300
Linear Change After heating(%)℃-2hrs		1500℃ ＜－1.0	1500℃ ＜＋1.5	1500℃ ＜－0.7	1500℃ ＜＋1.5	1500℃ ＜－0.5	1500℃ ＜－0.5
Crushing Strength After heating	Kgf/cm^2 ℃X24hrs Kgf/cm^2 ℃X2hrs	110℃ ＞140 1500℃ ＞500	110℃ ＞30 1500℃ ＞150	110℃ ＞40 1500℃ ＞200	110℃ ＞30 1500℃ ＞200	110℃ ＞30 1500℃ ＞200	110℃ ＞15 1500℃ ＞200
Chemical Composition(%)	Al_2O_3 Fe_2O_3	＞85 ＜0.5	＞80 ＜2.0	＞70 ＜2.0	＞59 ＜2.0	＞42 ＜2.0	＞41 ＜2.0
Characteristics		Corrosion resistance	Corrosion resistance	Air setting	Air setting	Heat setting	Air setting
Main Application		High temp. furnace	High temp. furnace	High temp. furnace	High temp. furnace	High temp. furnace	High temp. furnace

Brand / Properties		PL-140H	PL-140	PL-130	PL-ZR	PL-CR
Max. Service Temperature(℃)		1400	1400	1300	1650	1500
Quantity Required(kg/m^3)		2250	2250	2100	2900	3200
Linear Change After heating(%)℃-2hrs		1400℃ ＜－1.8	1400℃ ＜－1.8	1500℃ ＜－2.0	1500℃ ＜－1.5~＋0.5	1300℃ ±2.0
Crushing Strength After heating	Kgf/cm^2 ℃X24hrs Kgf/cm^2 ℃X2hrs	110℃ ＞40 1400℃ ＞150	110℃ ＞15 1400℃ ＞100	110℃ － 1300℃ ＞100	110℃ － 1500℃ ＞250	110℃ ＞150 1500℃ ＞300
Chemical Composition(%)	Al_2O_3 Fe_2O_3	＞36 ＜2.0	＞34 ＜2.5	＞28 ＜3.0	ZrO_2＞40 ＜1.0	Cr_2O_3＞26 －
Characteristics		Heat setting	Air setting	Heat setting	Corrosion resistance	Corrosion resistance
Main Application		Various furnace	Various furnace	Various furnace	Various furnace	Hearth

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Typical Properties

Properties \ Brand		HP-1760	HP-1700
Max. Service Temperature(℃)		1700	1650
Quantity Required(kg/m^3)		2400	2300
Linear Change After heating(%)℃-2hrs		1300℃ ＜－1.5~+0.5	1300℃ ＜－1.5~+0.5
Crushing Strength After heating	Kgf/cm^2 ℃X24hrs Kgf/cm^2 ℃X2hrs	110℃ ＞15 1300℃ ＞200	110℃ ＞15 1300℃ ＞200
Chemical Composition(%)	Al_2O_3 Fe_2O_3	＞56 ＜2.0	＞42 ＜2.0
Characteristics		Air setting	Air setting
Main Application		Reheating furnace	Reheating furnace