LONG KETER
REFRACTORIES

2025

MONOLITHIC REFRACTORIES

PRODUCT CATALOG

Zibo Long Keter New Materials Co.Ltd.

REFRACTORY CASTABLE

A. Conventional Castable

Use high alumina bauxite, mullite or corundum as aggregate, high alumina cement as binding agent, conventional castable is with high compressive strength and excellent performance.
Aggregate could also be porous materials to get insulating castable

Applications

- Casting an alternative to fireclay and high alumina brick
- Application for cyclone preheater of cement kiln, ceramic kiln, ash coal hoppers coal and incinerators
- Casting at EAF roof core,burner block, nose ring and kiln load

Conventional Castable Product Data

Type	Cast 13	Cast 13ES	Cast 15	Cast 16ES	Cast 17MT	Cast 18
Maximum Service Temperature (℃)	1300	1300	1500	1600	1700	1800
Maximum Grain Size of Aggregates (mm)	5	5	5	5	5	5
Approximate Weight Required for Casting (kg/m^3)	2010-2020	2010-2120	2200-2210	2300-2350	2550-2600	2700-2730
Approximate Amount of Water Required For Casting (%)	10-12	10-12	10-12	10-12	10	10-12
Bulk Density After Drying At 110℃ (kg/m^3)	2050-2070	2110-2120	2250-2260	2350-2400	2500-2550	2800-2820
Cold Crushing Strength After Drying At 110℃ (MPa)	35-38	40-45	30-32	40-50	35-38	49-50
Modulus of Rupture After Drying At 110℃ (Kg/cm^2)	60-70	70-80	70-75	70-75	70-80	100-120
Reheat Test, Permanent Linear Change After Heating At 1260℃ (%)	+0.5	+0.5	-0.5	-0.5	-0.5	-0.18
SiO_2 (%)	57.1	47.5	45.0	33.1	6.3	0.5
Al_2O_3 (%)	29.5	32.4	48.6	61.6	85.5	92.1
Fe_2O_3 (%)	4.2	6.0	1.2	1.5	1.4	0.5

Insulating Castable Product Data

Type	CAST 11LW	CAST 13LW
Maximum Service Temperature (℃)	1100	1300
Maximum Grain Size Of Aggregates (mm)	3	5
Approximate Weight Required For Casting (kg/m^3)	800-900	1200-1300
Approximate Amount of Water Required For Casting(%)	40-50	35
Bulk Density After Drying At 110℃ (kg/m^3)	900-950	1400-1450
Cold Crushing Strength After Drying At 110℃ (MPa)	3-4	11-12
Modulus Of Rupture After Drying At 110℃ (Kg/cm^2)	8.0	20-25
Reheat Test, Permanent Linear Change After Heating At 1260℃ (%)	-0.08	-0.05
SiO_2 (%)	55.0	47.1
Al_2O_3 (%)	15.0	40.5
Fe_2O_3 (%)	6.2	1.6

B. High Alumina Low Cement Castable

Less cement is added to decrease CaO content inside the castable, alumina powder is applied to increase strength and liquidity.

Low Cement Castable Product Data

Type	C70	NEO165	C82
Maximum Service Temperature (℃)	1600	1650	1700
Maximum Grain Size Of Aggregates (mm)	5	5	5
Approximate Weight Required For Casting (kg/m^3)	2400-2430	2550	2600-2630
Approximate Amount Of Water Required For Casting (%)	5.0-5.5	5.0	5.0-5.5
Bulk Density After Drying At 110℃ (kg/m^3)	2430-2440	2560	2630-2640
Cold Crushing Strength After Drying At 110℃ (MPa)	52-55	80-90	34-35
Modulus Of Rupture After Drying At 110℃ (Kg/cm^2)	60-65	62-65	40
Reheat Test, Permanent Linear Change After Heating At 1260℃ (%)	-0.05	-0.15	-0.40
SiO_2 (%)	36.1	22.4	13.1
Al_2O_3 (%)	61.2	70.1	82.5
Fe_2O_3 (%)	1.2	1.3	1.2
CaO(%)	-	-	1.5

PLASTIC
REFRACTORIES

Plastic Refractories is phos-bonded, bauxite,mullite or corundum-based refractories are used as aggregate. Its unsurpassed resistance to acid and neutral as well as basic slags allows it to survive the corrosive environment. The plastic refractories do not require forms during insulation where anchors present except for flat arch constructions

Usually the binder of plastic refractories is liquid aluminium dihydrogen phosphate, the plasticity can be adjusted when are doing the installation. We can also supply the plastic refractories with powder binder, and plastic refractories ready for use (packed in cartons)

Plastic Refarctories Product Data

Item		CPC65	CPC75	CPC80	CPC90
Service Temp (℃)		1550	1600	1650	1700
Bulk Density (g/m^3)		2.4	2.5	2.6	2.8
C.C.S.	110℃	30	65	80	85
	1110℃	45	70	90	95
	1500℃	50	90	100	110
M.O.R.	110℃	8	9	10	12
	1110℃	9	10	11	13
	1500℃	10	11	12	14
Max. Grain Size (mm)		5	5	5	5
Chemical Analysis (%)	Al_2O_3	65	75	80	90
	Fe_2O_3	2.0	2.0	1.8	1.5
Mixing Liquid Shall Be Supplied With The Plastic Refractories Powder					

REFRACTORY
MORTAR

PROPERTIES

For bonding the individual bricks together, protecting the joints from corrosion by slag and other furnace.
It helps bricks to be used in acid conditions and suitable for light bonding between insulation bricks.
High bonding strength with low shrinkage.
It combines high refractoriness with smooth working properties.
Available in both ready-to-use wet type and dry type.

APPLICATIONS

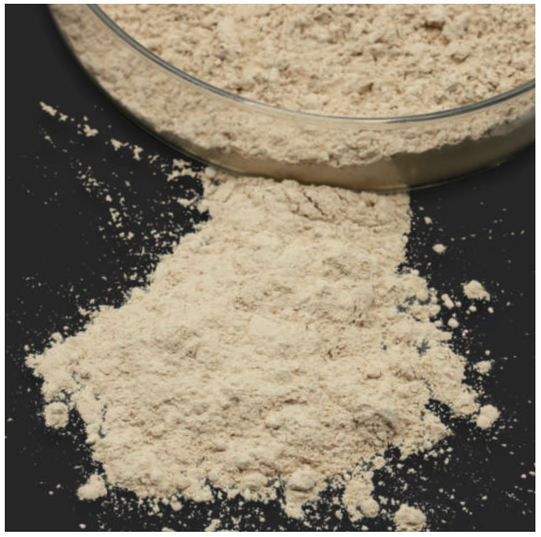
Used for laying all types of refractory blocks

Refractory Mortar Product Data

MORTAR DATA SHEET				
	Mortar 30 HM	Mortar 43 AM	Mortar 70 HM	Mortar 80 PM
CLASSIFICATION	HIGH-DUTY HEAT-SETTING MORTAR	SUPER-DUTY AIR-SETTING MORTAR(WET TYPE)	HIGH-ALUMINA HEAT-SETTING MORTAR	INORGANIC PHOSPHATE-BONDED HIGH-ALUMINA MORTAR(WET TYPE)
CHEMICAL COMPOSITION: (APPROXIMATE)				
SiO_2 (%)	59	52.4	25.2	10.1
Al_2O_3(%)	32.3	43.5	70.1	80.0
Fe_2O_3(%)	1.8	1.4	1.5	1.8
PHYSICAL PROPERTIES				
Orton Cone	30	33-34	37-38	38
Approximate Amount Of Water For Trowelling Consistency	20-25		18-20	220-225
Per 1000 Pcs 9' Standard Brick, Equivalent Thinly Trowelled Joints	160-180	200-210	150-200	
Modulus Of Rupture After Drying At 110℃(kg/cm^2)	20	25	23	45

CALCIUM
ALUMINATE CEMENT

LONG KETER is supplying a comprehensive range of Calcium Aluminate Cement



Feature

- Rapid-hardening, high strength
- High refractoriness, high service temperature
- Good resistance to corrosion,high wear resistance
- High thermal shock stability
- Low thermal conductivity,low linear shrinkage
- Good integrity with furnace lining, easy operation,
- Allow direct contact of fire, suitable for various atmosphere

Calcium Aluminate Cement Product Data

Category		CA50		
Product Grade		A600	A700	A900
Chemical Composition (%)	SiO_2	≤8.0	≤7.5	≤6.0
	Al_2O_3	≥50.0	≥51.0	≥53.5
	Fe_2O_3	≤2.5	≤2.5	≤2.5
	R_2O	≤0.4	≤0.4	≤0.4
325M Residue On Sieve (%)		≤15	≤12	≤8
Specific Surface Area/BET (m^2/kg)		≥300	≥320	≥350
Initial Setting Time (min)		≥45	≥60	≥90
Final Setting Time (h)		≤6	≤6	≤6
Flexural Strength (MPa)	1d	6	6.5	8.0
	3d	7	7.5	10.0
Compressive Strength (MPa)	1d	45	55	72
	3d	55	65	82

PURE CALCIUM ALUMINATE
BINDER FOR REFRACTORY

- As with all hydraulic binders, Pure Calcium Aluminate Binder must be stored in dry conditions, off the ground. In this case, it will retain its properties for at least 12 months. In many instances, experience has demonstrated that properties are retained for more

- Calcium Aluminate cement is designed to be used at high temperature and harsh environment, is a pure calcium aluminate binder with an alumina content of approximately 70%-79%. It has outstanding performance during hydration and after exposure to high temperatures.

Pure Calcium Aluminate Binder For Refractory Product Data

Categor	LKTPC 71	LKTPC 72	LKTPC 80
Al_2O_3（%）	＞68.5	＞68	＞79
CaO（%）	＜31	＜12	＜19.5
MgO（%）	＜0.5	＞18	＜0.5
SiO_2（%）	＜0.8	＜1	＜0.35
Fe_2O_3（%）	＜0.4	＜0.5	＜0.2
TiO_2（%）	＜0.4	＜0.4	＜0.3
K_2O+Na_2O（%）	＜0.5	＜0.5	＜0.7
Blaine Specific Surface（cm^2/g）	＞4000	＞3500	＞8000
Density （g/cm^3）	2.9-3.05	2.95-3.1	3.2-3.3
Initial Set (min)	＞150	＞140	＞35
Final Set (min)	＜300	＜500	＜150
Compressive strength (MPa)			
6h	＞20	-	＞5
24h	＞35	＞10	＞25

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REFRACTORIES

TEL./FAX.: 0086-533-2210989
MOBILE: 0086-18678181477
WEB: www.longketer.com
E-Mail: sales@longketer.com

ZIBO LONG KETER NEW MATERIALS CO.,LTD

ADDRESS: 805, BLOCK B, RUNDE PLAZA, BEIJING RD., ZHANGDIAN,
ZIBO, SHANDONG, CHINA 255000