HEAT INSULATING MATERIAL

PRODUCT CATALOG

LONG KETER® REFRACTORIES

CERAMIC FIBER

CERAMIC FIBER BLANKET

LONG KETER supplying a comprehensive range of CERAMIC FIBER BLANKET, Ceramic Fiber Blanket adopts high pure raw materials without any binding agent, ensure the product own good reliability and stability in any environment. The function of the blanket isn't affected by water and oil, it will recover its thermal performance and physical property after drying.

Needing blanket in different size and thickness provides users a wide range of material selection to gain the best heat insulation structure and energy saving effect.

Product Data

Type		LKT1100	LKT1260	LKT1360	LKT1430	LKT1500
Classification Temperature(°C)		1100	1260	1360	1430	1500
Color		White	White	White	White	Blue/Green
Density(kg/m³)		96、128、160				
Permanent Linear Shrinkage (Heat Preservation 24 Hour,128kg/m³)		≤--4 (1000°C)	≤--3 (1000°C)	≤--3 (1100°C)	≤--3 (1350°C)	≤--3 (1600°C)
Thermal Conductivity(W/M.K)		0.09(400°C) 0.16(800°C)	0.09(400°C) 0.16(800°C)	0.12(400°C) 0.20(1000°C)	0.16(400°C) 0.20(1000°C)	0.16(400°C) 0.20(1000°C)
Chemical Composition (%)	Al_2O_3	42-44	45-46	52-55	39-40	43
	SiO_2	–	–	–	–	–
	$Al_2O_3+SiO_2$	96	98	99	–	–
	$Al_2O_3+SiO_2+ ZrO_2(Cr_2O_3)$	–	–	–	99	99
	ZrO_2	–	–	–	15-17	–
	Cr_2O_3	–	–	–	–	2.5-3.0

Key Features for CERAMIC FIBER BLANKET

- Low heat strong capacity, low thermal conductivity
- Excellent thermal stability and shock resistance
- Excellent tearing resistant
- Excellent insulating performance, fire prevention and sound absorption
- Double-side needing operation produces tough, resilient and strong blankets, which resist tearing both before and after heating
- Easy cutting and installation

The main application for CERAMIC FIBER BLANKET are listed below:

- All kinds of industrial kiln linings (hot surface and back lining)
- Furnace body expansion joint, furna ce door, top cap seals
- High building fireproof and heat insulation
- Thermal resistance component of auto industry
- High temperature filter media
- Insulation for field stress relieving of welds

Key Features for CERAMIC FIBER BOARD

- Low thermal conductivity and low heat storage
- High temperature stability and resistant to thermal shock
- High crushing strength and good toughness
- Allow machining and cutting, easy application
- Resistant to airflow erosion

The main application for CERAMIC FIBER BOARD are listed below:

- All kinds of industrial furnace hot face and back face insulation
- Kiln liner of the High-temperature furnace, kiln cars, door damper, furnace temperature to separate plate
- Deep processing products molding mould, like craft glass etc.
- Astronavigation, ship-building heat insulation, fireproofing, sound proofing, insulation

CERAMIC FIBER BOARD

LONG KETER supplying a comprehensive range of CERAMIC FIBER BOARD, all kinds of ceramic fiber boards adopt ceramic fiber which is in corresponding to temperature level as raw material, through the large automatic vacuum filter molding machine to shape them, and then they will be done after special baking.

The product with good toughness and strength appears flattening and the ceramic material distributes uniformity, it also has excellent thermal insulation performance. Heating is not inflated. For light, construction convenient, free shear and bending, it is the ideal energy-efficient insulation materials of a furnace, piping and other equipment.

Product Data

Type	LKT1100	LKT1260	LKT1360	LKT1430	LKT1500
Classification Temperature(°C)	1100	1260	1360	1430	1500
Color	White	White	White	White	Light Green
Density(kg/m³)	280	280	280	280	280
Linear Shrinkage After Firing%(°C*24H)	≤4 (1000°C)	≤4 (1200°C)	≤4 (1300°C)	≤4 (1400°C)	≤4 (1400°C)
Ignition Lost (At1000°C*5hr)LOI%	5	5	5	5	5
Thermal Conductivity(W/M.K)	0.132(600°C)	0.132(600°C)	0.132(600°C)	0.132(600°C)	0.132(600°C)
	0.15(800°C)	0.19(1000°C)	0.19(1000°C)	0.19(1000°C)	0.19(1000°C)
Rupture Strength(Mpa)	0.5	0.5	0.5	0.5	0.5

CERAMIC FIBER MODULE

LONG KETER supplying a comprehensive range of CERAMIC FIBER MODULE. LKT ceramic fiber module adopts high quality ceramic fiber blanket, which is made up to compression module after folding, compression, packing. Module can choose kinds combination of anchor and furnace body. Installation method is so simple that can quicken the speed of furnace lining construction largely. After installation, the bandaging is cut and the modules are to form an integrated insulating lining. The anchor system in remote from the module hot face maintains the metal components at a relatively low temperature.

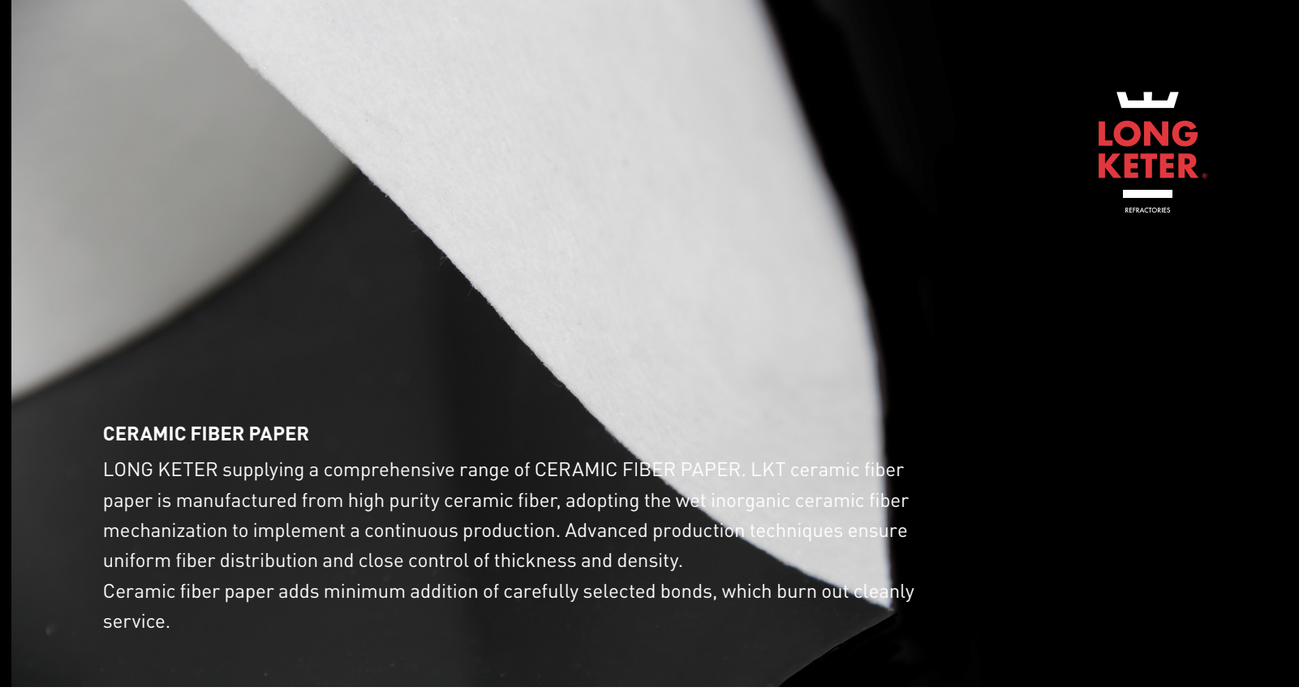
Key Features for CERAMIC FIBER MODULE

- The anchor on the back allows both in-line and parquet installation
- The decompression of the blanket folds give tightly sealed intermodular joints with both configurations
- The resilient blanket is resistant to mechanical damage
- Low thermal conductivity gives high thermal efficiency
- Total resistance to thermal shock
- No drying or curing required–so available for production operation immediately after installation
- The anchor is remote form the module hot face
- It can be cut to satisfy the requirement of different parts

The main application for CERAMIC FIBER MODULE are listed below:
Metallurgy, machinery, building materials, petrochemical industry, non–ferrous metal and other industries of all kinds of industrial furnace, heating furnace lining.

Product Data

Type	LKT1100	LKT1260	LKT1360	LKT1430	LKT1500
Classification Temperature(°C)	1100	1260	1360	1430	1500
Density(kg/m³)			160, 170, 190, 210		



CERAMIC FIBER PAPER

LONG KETER supplying a comprehensive range of CERAMIC FIBER PAPER. LKT ceramic fiber paper is manufactured from high purity ceramic fiber, adopting the wet inorganic ceramic fiber mechanization to implement a continuous production. Advanced production techniques ensure uniform fiber distribution and close control of thickness and density.
Ceramic fiber paper adds minimum addition of carefully selected bonds, which burn out cleanly service.

Key Features for CERAMIC FIBER PAPER

- Low thermal conductivity, low thermal capacity
- Low shot content
- Good resistance to tearing, high flexibility
- Do not contain asbestos, resistance to corrosion, not react to liquid aluminum
- Good electrical insulation and sound insulation performance
- Excellent mechanical performance

The main application for CERAMIC FIBER PAPER are listed below:

- Industrial insulation, seal, protective materials
- Electric heat device insulation, heat insulation materials
- Molten metal gasket
- Instrument equipment, electric heating element of insulation and heat insulation materials
- Fire protection
- Thermal barriers for vehicles and spaceflight
- Fillers of expansion joints

Product Data

Classification Temperature (°C)		1260	1430
Density (kg/m³)		200±15	200±15
Organic Content (%)		6–8	6–8
Tensile Strength (kpa)		1mm≥300; 2mm-6mm≥400	
Permanent Linear Shrinkage(°C*24h)		≤3.5(1000°C)	≤3.5(1200°C)
Thermal Conductivity (W/M.K)	400°C	0.115-0.121	
	400°C	0.165-0.175	

4000×1220×1	20000×1220×2	15000×1220×3	10000×1220×4	8000×1220×5
40000×610×1	20000×610×2	15000×610×3	10000×610×4	8000×610×5

LONG KETER
REFRACTORIES

CERAMIC FIBER TEXTILES

LONG KETER supplying a comprehensive range of CERAMIC FIBER TEXTILES. Industrial refractory fiber is made from ceramic fiber, E-Glass Fiber, vycor fiber, PANOF, etc..The products include yarn, cloth, tape, twisted rope, packing, tube, coated fabric and other kinds of tech textiles, which are widely used in heat insulation sealing etc..

Key Features for CERAMIC FIBER TEXTILES
- Excellent high temperature resistant performance
- Thermal shock resistance
- Low thermal capacity
- Easy construction

The main application for CERAMIC FIBER TEXTILES are listed below:
- Tape: Industrial heat insulation, pipe and cable coated, bolted flange connection, friction reinforced materials
- Cloth: Large area industrial heat insulation, fire protection, and coating cloth and base cloth, etc.
- Coated cloth: Fire smoke proof, adornment, Beirut cotton print, fire blanket, thermal insulation, etc.
- Packing: All kinds of high temperature furnace, boiler seal and heat insulation, burner sealed, heat exchanger, kiln car seal, furnace flue heat insulation sealing, high temperature valve, etc.
- Twisted rope\tube: Coating high temperature resistant insulated wire,cable and high temperature tube, high temperature pipe heat insulation and seal, etc.

Product Data

Tape	Thickness: 1.5,2.0,3.0	Width: 10, 15, 25, 50, 75, 100, 120, 150
Cloth	Thickness: 1.5,2.0,2.5,3.0,5.0	Width: 1000-1500
Coated Cloth	Thickness: 1.5,2.0,3.0	Width: 1000-1500
Packing	Diameter: 5, 6, 8, 10, 12, 13, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50	
Twisted Rope	Diameter: 3, 4, 5, 6, 8, 10, 12, 13, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50	
Twisted Tube	Inner Diameter: 12, 14, 15, 16, 18, 20, 25, 30, 50, 100	

INSULATING FIREBRICKS

INSULATING FIREBRICK

LONG KETER supplying a comprehensive range of Insulating Firebrick. Insulating Firebrick are made from high-purity refractory clays; temperature of use ranging from 1100°C to 1700°C and each grade is formulated to meet specific thermal and physical requirements. For higher temperature products, their addition of alumina are graduated. Each grade is added by classified organic filler. This organic filler burns out during manufacture process to give a uniform and controlled pore structure.

Key Features for Insulating Firebrick
- Low thermal conductive, low heat storage
- Purity
- Good thermal insulation, enable the use of thin-walled constructions
- The good alumina contents confer good refractoriness
- Low iron and alkali fluxcontent contributes to their stability to reducing atmosphere
- These can be machined to special shapes, incurring fewer sections and joints

Insulating Firebrick are classified to Clay Insulating Brick, High Alumina Insulating Brick and Mullite Insulating Brick.

LONG KETER
REFRACTORIES

Clay Insulating Bricks Product Data

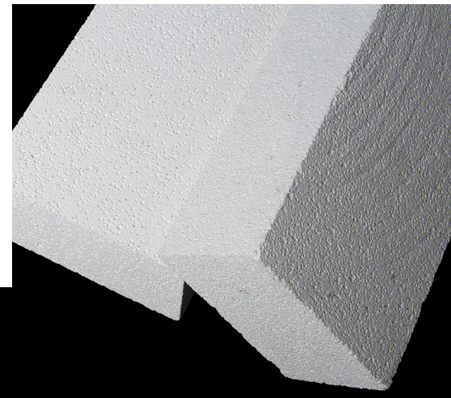
Type	NG-1.5	NG-1.3a	NG-1.3b	NG-1.0	NG-0.9	NG-0.8	NG-0.7	NG-0.6	NG-0.5	NG-0.4
Density (kg/m³)	1.5	1.3	1.3	1.0	0.9	0.8	0.7	0.6	0.5	0.4
Cold Crushing Strength(Mpa)	5.9	4.4	3.9	2.9	2.5	2.5	2.0	1.5	1.2	1.0
Experimental Temperature of 2% Change of Reheating Line	1400	1400	1350	1350	1300	1250	1250	1200	1150	1150
Thermal Conductivity (W/M.K)350±25°C	0.70	0.60	0.60	0.50	0.40	0.35	0.35	0.25	0.25	0.20

High Alumina Insulating Bricks Product Data

Type	LG-1.0	LG-0.9	LG-0.8	LG-0.7	LG-0.6	LG-0.5	LG-0.4
Density(kg/m³)	1.0	0.9	0.8	0.7	0.6	0.5	0.4
Cold Crushing Strength (Mpa)	≥4.0	≥3.5	≥3.0	≥2.5	≥2.0	≥1.5	≥0.8
Experimental Temperature of 2% Change of Reheating Line	1400	1400	1400	1350	1350	1250	1250
Thermal Conductivity (W/M.K)350±25°C	≤0.50	≤0.45	≤0.35	≤0.35	≤0.30	≤0.25	≤0.20
Al_2O_3				≥48			
Fe_2O_3				≤2			

Mullite Insulating Bricks Product Data

Type		JM23	JM26	JM28	JM30
Classification Temperature(°C)		1260	1430	1540	1600
Properties At Mean Temperature					
Density(kg/m³)		500	800	900	1100
Compressive Strength(Mpa)		1.0	2.0	2.5	3.0
Rupture Strength(Mpa)		0.7	1.5	1.8	2.0
Properties At High Temperature					
Thermal Conductivity(W/M.K)		0.22(600°C) 0.27(800°C)	0.39(800°C) 0.43(1000°C)	0.37(800°C) 0.41(1000°C)	0.43(800°C) 0.45(1000°C)
Chemical Composition (%)	Al_2O_3	45	55	64	73
	SiO_2	48	41	32	25
	Fe_2O_3	1.0	0.9	0.7	0.6



LONG KETER®

REFRACTORIES

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