GPS MONACO Group
Construction

Insulation Catalog

Ceramic Fiber Blanket

Ceramic fiber blanket is made of high-quality ceramic fiber bulk with the double-sided needle punching method to improve the tensile strength and flatness of the ceramic fiber blanket. It has excellent characteristics such as low thermal conductivity, good thermal stability, good thermal shock resistance and tensile strength, thermal insulation and fire prevention. and not contain organic binders, ensuring the stability of the ceramic fiber blanket at high and low temperatures. it widely used as insulation in power generation, steel, cement, glass, ceramics industry etc.

Technical Data

Classified Temp.		1100℃	1260℃	1260℃	1360℃	1430℃
Working Temp.		<1000 ℃	1050℃	1100℃	1200℃	1350℃
Color		white	white	white	white	white
Density(kg/m³)		96/128	96/128	96/128	96/128	96/128
Linear Shrinkage (%)		-4 (1000℃)	-3 (1000℃)	-3 (1100℃)	-3 (1250℃)	-3 (1350℃)
Thermal conductivity(W/M.K)		0.085-0.11(400℃) 0.152-0.20(600℃)			0.095-0.12(400℃) 0.164-0.21(600℃)	
Tensile Strength(Mpa) (25mm thickness)		≥0.04	≥0.04	≥0.04	≥0.04	≥0.04
Chemical (%)	Al_2O_3	44	46	47-49	52-55	39-40
	$Al_2O_3+SiO_2$	96	97	99	99	-
	$Al_2O_3+SiO_2$ $\pm ZrO_2$	-	-	-	-	99
	ZrO_2	-	-	-	-	15-17
	Fe_2O_3	<1.2	<1.0	0.2	0.2	0.2
	Na_2O+K_2O	≤0.5	≤0.5	0.2	0.2	0.2
Size(mm)		3600/7200*610/1220*10-50mm or as customized				

Product Features

Low thermal conductivity;
Good heat and chemical stability ;
Thermal shock resistance;
Tensile strength ;
Good thermal insulation;
Fire proof

Application

- ★ Industrial kiln wall lining, backing material;
- ★ Materials for expansion joints in masonry of industrial kilns, furnace doors, and thermal;
- ★ Insulation seals for top cover Thermal insulation materials for high temperature pipelines;
- ★ High temperature thermal i nsulation gasket;
- ★ Raw materials for ceramic fiber module / budding block .

Ceramic Fiber Board

Ceramic fiber board is made of ceramic fiber cotton by the process of vacuum forming or dry process refined by dry and machining. It has the good specialty of rigidity flexibility heavy intensity anti-wind erosion, non-expansion, lightweight, and easy to construct. It can be cut and bent optionally. Thus, it is the practical and efficient material of kiln and furnace, pipe and other thermal insulation equipment.

Application

- ★ The wall liner and back lining materials of high-temperature reaction, reheating equipment and various industrial furnace such as used glass tempering furnace, pottery kiln, ceramic kiln and tunnel kiln;
- ★ Insulating and fire proof plate of furnace door and roof or house chimney and fireplace;
- ★ Lows fire proof and insulation for chimney cake ovens, pizza oven; boilers and heater combustion chamber
- ★ Aluminum factories-reduction cell firebricks back linings;

Product Features

Low heat capacity, low thermal conductivity;
High compressive strength and long service life;
Non brittle material, good toughness;
Excellent thermal stability and thermal shock resistance;
Excellent sound absorption and noise reduction performance;
Accurate size and good flatness
Homogeneous structure, easy to machine.

Technical Data

Classified Temp.		1100℃	1260℃	1260℃	1360℃	1430℃
Working Temp.		<1000℃	1050℃	1100℃	1200℃	1350℃
Color		white	white	white	white	white
Density(kg/m³)		260-320	260-320	260-320	260-320	260-320
Linear Shrinkage (%) (24 hrs)		-3 (1000℃)	-3 (1050℃)	-3 (1100℃)	-3 (1250℃)	-3 (1350℃)
Thermal conductivity(W/M.K)		0.095-0.112(400℃) 0.145-0.165(600℃)			0.110-0.125(400℃) 0.165-0.175(600℃)	
Organic Content (%)		≤8	≤8	≤8	≤8	≤8
Water Content (%)		≤1	≤1	≤1	≤1	≤1
Chemical (%)	Al_2O_3	44	46	47-49	52-55	39-40
	$Al_2O_3+SiO_2$	96	97	99	99	-
	$Al_2O_3+SiO_2+ZrO_2$	-	-	-	-	99
	ZrO_2	-	-	-	-	15-17
	Fe_2O_3	<1.2	<1.0	0.2	0.2	0.2
	Na_2O+K_2O	≤0.5	≤0.5	0.2	0.2	0.2
Size(mm)		1200*1000mm; 1000*600mm;900*600mm;600*400mm 20-50mm thickness				

Ceramic Fiber Paper

Blending with high quality ceramic fibers and binders, additives, ceramic fiber paper is proved to be a flexible and uniform sheet in handing heat treatment. Our paper has a highly uniform structure due to its well-controlled weight and thickness, assuring homogeneous thermal conductivity and a clean ,smooth surface.

Product Features

Excellent electrical insulation properties;
Excellent machinability;
High strength, tear resistance;
High flexibility, precise thickness;
Low ball content;
Low heat capacity, low thermal conductivity;

Technical Data

Classification Temperature		1260℃	1430℃
Working Temperature		1050℃	1350℃
Bulk density (kg/m³)		220	
Linear Shrinkage (%)		-3 (1050℃)	-3 (1350℃)
Organic content(%)		≤10	
Thermal conductivity (w/m.k)		0.075-0.085 (200℃)	
		0.110-0.121 (400℃)	
		0.160-0.170 (600℃)	
Moisture Content(%)		≤1	≤1
Chemical composition (%)	Al_2O_3	45-46	38-47
	SiO_2	51-52	51-52
	ZrO_2		15-17
Size(mm)		60000*610/1220*1	
		30000*610/1220*2	
		20000*610/1220*3	
		15000*610/1220*4	
		12000*610/1220*5	
		10000*610/1220*6	
Packing		By Carton	

Application

- ★ Industrial insulation, sealing, thermal insulation materials;
- ★ Noise-absorbing and heat-insulating materials for automobile mufflers, heat-insulating materials for exhaust pipes;
- ★ Furnace door and furnace body expansion joint filling material;
- ★ Gasket at molten metal;
- ★ Release of glass-ceramic and hot-melt (bent) glass;
- ★ Cast aluminum model lining;
- ★ Insulation of denitration catalyst production line;

Ceramic Fiber Module

Ceramic fiber module is made of the corresponding material of the ceramic fiber needle punched blanket, which is processed on a special machine according to the structure and size of the fiber component. In the process of processing, the products are kept at a certain amount of compression to ensure that after the wall lining is completed, the products expand in different directions, making them squeeze each other into a seamless whole. The products can be directly fixed on the steel plate anchoring nails of the dry industrial furnace shell through various forms of anchors.

Product Features

Elastic fiber blanket can resist external mechanical forces;
Light weight, low heat absorption;
Low thermal conductivity can bring high energy saving effect;
Capable of resisting thermal shock;
The lining can be put into use immediately after installation without drying and curing;
Blankets will squeeze each other in different directions after being untied, without seam barrier.

Application

- ★ Thermal insulation of furnace lining in petrochemical industry;
- ★ Lining of kilns in ceramic, glass and other building materials industries;
- ★ Lining of heat treatment furnace in adiabatic heat treatment industry;
- ★ Heat insulation lining of other industrial kilns;

Technical Data

Classified Temperature		1260℃	1260℃	1430℃
Working Temperature		1050℃	1100℃	1350℃
Density(kg/m³)		200-220		
Linear Shrinkage (%) (24hrs)		-3 1000℃	-3 1100℃	-3 1350℃
Thermal Conductivity (W/m.k)	200℃	0.050-0.060		
	400℃	0.095-0.120		
	600℃	0.160-0.195		
Chemical Composition %	Al_2O_3	≥44	≥45	≥34
	SiO_2	≥52	≥54	≥50
	ZrO_2			≥15
	Fe_2O_3	≤1.0	≤0.5	≤0.5
	K_2O+Na_2O	≤1.0	≤0.2	≤0.2
Size		300/600*300*150-350 mm		
Packing		Woven bag		

Ceramic Fiber Bulk/Cotton

Ceramic fiber cotton is made by melting high-purity raw materials in an electric resistance furnace and using blowing/spinning to form fibers. It is a bulk fiber without secondary processing and heat treatment.

Product Features

Low heat capacity;
low thermal conductivity;
Excellent thermal stability;
Excellent chemical stability;
Free of bond and corrosive substances;
Excellent sound absorption performance.

Application

- ★ Raw materials of fiber blanket, board and textile products;
- ★ Fiber spraying, castable, coating materials;
- ★ High temperature kiln, heating device, wall lining gap filler;
- ★ Insulation filling materials for corners and complex spaces;
- ★ Raw materials of wet products.

Technical Data

Classification Temp(°C)		1100	1260	1260	1360	1430
Working Temp (°C)		<1000	1050	1100	1200	350
Color		white	white	white	white	white
Fiber Diameter (μm)		3~5	3~5	3~5	3~5	3~5
Chemical Composition (%)	Al_2O_3	44	46	47~49	52~55	39~40
	$Al_2O_3+SiO_2$	96	97	99	99	-
	$Al_2O_3+SiO_2+ZrO_2$	-	-	-	-	99
	ZrO_2	-	-	-	-	15-17

Ceramic Fiber Textiles

Ceramic fiber textile is made from ceramic fiber cotton, reinforced with glass filament or stainless steel.textile include rope. tape and cloth etc. Widely used in welding, foundry, aluminum and steel mills, boiler insulation and sealing etc

Product Features

Excellent high temperature resistance;
Asbestos free;
Low heat capacity;
Low thermal conductivity, thermal shock resistance ;
Good insulating properties and long service life;
Chemical resistance and easy construction.

Application

- ★ Insulation and sealing of various industrial furnaces and flues;
- ★ High temperature pipeline insulation and sealing;
- ★ Fireproof and high temperature insulation curtain;
- ★ High temperature valveand pump seals; Heat exchanger, kiln car seal;
- ★ High temperature resistant insulated wire and cable coating;

Technical Data

Description		Ceramic Fiber Textiles					
		Cloth		Tape		Round/Square Rope	
Reinforcement		Glass Fiber	Stainless Steel	Glass Fiber	Stainless Steel	Glass Fiber	Stainless Steel
Continuous Temperature (°C)		650	1000	650	1000	650	1000
Color		White		White		White	
Density (kg/m³)		500-550					
Organic Content (%)		≤15		≤15		≤15	
Size (mm)	thickness	2-6		2-6		-	
	width	1000		20-100		-	
	length	30000		30000		30000	
	diamater	-		-		6-50	

It's a new thermal insulation blanket specially designed for steam turbines to power plant customers. It is made from selected natural raw materials such as burnt stones, which are melted at high temperature, blown into fiber, solidified and molded, cut and rolled. It has high temperature resistance, It has the characteristics of good stability, high chemical stability, low thermal conductivity, low heat capacity, and convenient cutting and construction. Compared with traditional alumi-num silicate needle punched blankets, it has lower slag ball content, higher tensile strength and better rebound rate. It is good, has no burrs in cutting, is easy to construct, has better thermal insulation effect and longer service life.

Product Features

1. The thermal capacity and thermal conductivity are lower than similar products;
2. The fiber diameter is uniform, and the slag ball content is lower in products with the same density;
3. Stable chemical performance without pulverization;
4. The same body density product has higher tensile strength;
5. High flatness, cutting construction without burrs;
6. Good thermal shock resistance and long service life;

Technical Data

Product Item	1260 Blanket	Plus Blanket	National Standard
Classification Temperature(℃)	1260	1360	1260
Color	Pure White	Pure White	White
Density(kg/m³)	96/128	96/128	96/128
Slag Ball Content (%) (Particle size greater than 0.212mm)	≤20	≤5	≤20
Thermal Conductivity(W/M.K) (Bulk density 128 Kg/m³)	≤0.153 (500℃)	≤0.135 (500℃)	≤0.156 (500℃)
Tensile Strength (Kpa) (Bulk density 128 Kg/m³)	≥34	≥110	≥21

Rock Wool Board

Rock wool board raw material is superior basalt or other natural ores, after being melt at high temperature (about 1500℃) ,use international advanced four-roll centrifugal cotton making process, melt the basalt into 4-7μm discontinuous fibers,then add certain amount adhesive, dustproof oil, water repellent to the rock wool fiber. After settlement, solidification, cutting and other processes, make different density series products based on various usage.

Product Features

- ★ Good thermal performance. In normal temperature, its thermal conductivity is between 0.03-0.044W/(m.K);
- ★ Excellent fireproof performance.Rock wool is inorganic silicatefiber, not flammable;
- ★ Excellent sound absorption and sound insulation capability;
- ★ Waterproof.

Technical Data

Properties		Unit	Indicators
Combustion performance		--	Class A1 non-combustion
Compression Strength(10%deformation)		kPa	≥40
Hydrophobic rate		%	≥98.0
Melt temperature		℃	> 1000
Acidity ratio		--	≥1.8
Moisture absorption rate		%	≤1.0
Thermal conductivity (average 25℃)		W(m.k)	≤0.040
Dimensional stability		%	≤1.0
Water absorption(Partial Immersion)		Kg/m2	Short term(24h)≤1.0 Long term(28d)≤3.0
Thickness tolerance		mm	±2
Right angel degree of deviation		mm/m	≤5
Planeness tolerance		mm	≤6
properties after ignition-burning	Shrinkage percentage	%	(750℃, 0.5h) ≤8
	Mass loss rate	%	(750℃, 0.5h) ≤10
Size			1200x600x(50-150)mm Or as customized
Density			80-150 kg/m3 or as customized
Package			1. Shrink film 2. Pack on pallets

Application

Use for thermal insulation, heat insulation, sound insulation, noise reduction, etc.of large pipes, containers, storage tanks, boilers, conveying pipelines;

Ships, buildings and other occasions where there are certain requirements for waterproof and fire protection;

Thermal insulation, sound absorption and noise reduction of equipment in petroleum, electric power and chemical industries;

Use for thermal insulation and sound insulation of building walls and roofs; fire protection and noise reduction of building partition walls, firewalls, fire doors and elevator shafts.

Rock Wool Blanket

Rose rock wool blanket is designed and manufactured for thermal insulation of uneven surfaces, belong to grade A non-combustible products. Good thermal insulation effect, Excellent performance on Sound absorption and noise reduction. Aluminum foil or wire mesh can be attached to the surface.

Product Features

Small coefficient of heat conductivity and good capability of heating preservation.
Excellent fireproof capability.
Excellent sound absorption and sound insulation capability.
Green thermal insulation materials and no harm for body.

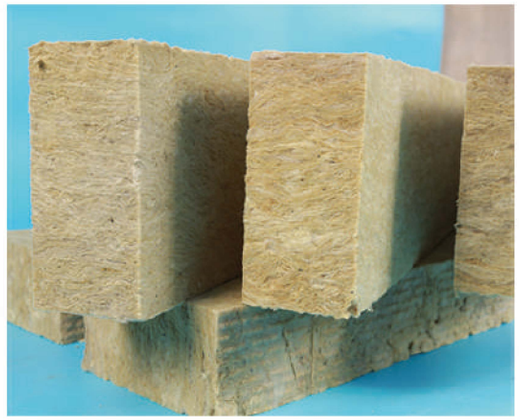
Technical Data

Property		Indicator
Maximum Use Temperature (℃)		750
Recommended Use Temperature (℃)		650
Surface burning characteristics	Flue gas development index	≤25
	Flame spread index	0
Combustion performance		Non-combustible A1
Volumetric Hygroscopic Rate (%)		≤1
Mass Hygroscopic Rate (%)		≤1
Density (kg/m³)		100
Thermal Conductivity (W/m·K)	70℃	0.038
	100℃	0.042
	150℃	0.048
	200℃	0.056
	250℃	0.063
	300℃	0.070
	350℃	0.077
	400℃	0.085
Health and safety		No asbestos , No irritating odor , No bacteria
Shot content (Particle diameter ≥0.25mm)		≤ 12.0 %
The average diameter of fiber		≤7.0 μm
Density Tolerance		± 15%
Moisture		≤0.5%
Organic content		≤ 4.0%
Size		3mx600mm or 5mx600 Or as customized
Thickness		50-100mm
Density		80-120kg/m³
Package		Plastic bag

Application

Non-planar thermal insulation, noise reduction of large diameter pipes, storage tanks,etc. On industry. And enhance the fire protection capability of the system;
Use for various light steel structures and non-planar thermal insulation in buildings, and can enhance the fire resistance of the system.

Rock Wool Strip



It can improve the fire resistance of the building exterior wall insulation system, matched with the thermal insulation materials whose outer walls cannot reach Class A fire resistance. Used as fire barrier, In order to increase the overall fire resistance of the building exterior wall. It has the advantages of high compressive and tensile strength, low water and moisture absorption, good dimensional stability, no thermal expansion or shrinkage, aging resistance, etc.

Product Features

★ Small coefficient of heat conductivity and good capability of heating preservation;
★ Outstanding effect of energy-saving;
★ Excellent fireproof capability. Excellent sound absorption and sound insulation capability;
Green thermal insulation materials and no harm for body;
★ Waterproof;
★ The folded rock wool board with certain compression resistance has greater drawing
★ Strength, and it does not tend to peel off and has excellent improved durability;

Application

Use as fire barrier, combination with non-class A fireproof insulation materials such as polystyrene board and extruded plastic board. Improve fire resistance of the external wall insulation system;
Used as the core material of metal sandwich panels;
Used in places with high requirements for fire protection, waterproof, thermal insulation, sound insulation, etc.

Technical Data

Property	Indicators
Tensile Strength (perpendicular to the surface)	≥140kPa
Compression Strength (10% deformation)	≥80kPa
Fiber Diameter	≤6mm
Thermal Conductivity (25℃)	≤0.044W(m.k)
Combustibility	A1
Melt Temperature	≥ 1000 ℃
Acidity Coefficient	≥1.8
Hydrophobicity	≥99%
Mass Moisture Absorption	≤ 0.5%
Water absorption(Partial Immersion, 24h)	≤0.5kg/m²
Water Absorption(Partial Immersion, 28d)	≤0.8kg/m2
Dimensional Stability	≤ 0.5%
K_2O+Na_2O	≤ 5.0%
Size	1200x150mm, 1200x200mm or as customized
Thickness	40-150mm
Density	80-120kg/m³

Rock Wool Pipe

Designed and produced for small diameter pipe insulation, belong to grade A non-combustible products. Excellent performance on thermal insulation, heat insulation, sound absorption and noise reduction. Construction is convenient. The surface can be covered with aluminum foil.

Product Features

Good capability of heating preservation.
Outstanding effect of energy-saving.
Excellent fireproof capability.
Excellent sound absorption and sound insulation capability.
Green thermal insulation materials and no harm for body.

Technical Data

Performance	Indicators
Density	120kg/m³
Thermal Conductivity	
70℃	0.040W/m.k
100℃	0.044W/m.k
150℃	0.049W/m.k
200℃	0.054W/m.k
250℃	0.066W/m.k
300℃	0.069W/m.k
350℃	0.078W/m.k
400℃	0.088W/m.k
Max Usage Temperature	750℃
Recommend Usage Temperature	650℃
Flame Spread Indicator	0
Combustion Performance	Non combustion Class A1
Mass Moisture Absorption	≤1%
Volumetric Moisture Absorption	≤1%
Asbestos	without
Length	1m
Thickness	25-150mm
Nominal Diameter	22-610mm

Application

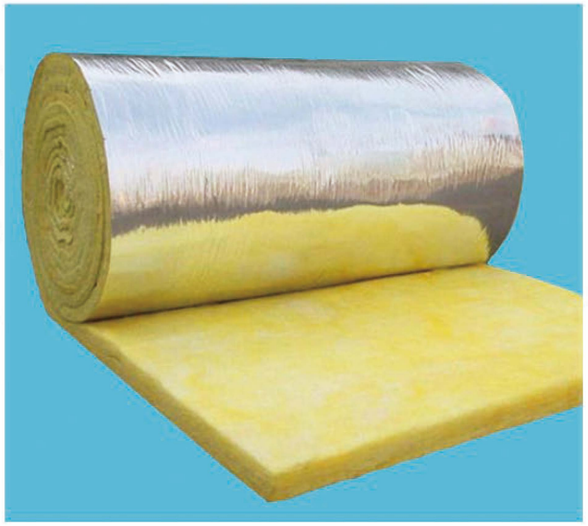
Mainly used for thermal insulation and noise reduction of small-diameter pipes such as boilers and equipment in electric power, petroleum, chemical, metallurgy, shipbuilding, textile and other industries

Glass wool Blanket

Glass wool blanket is made from natural sand to which recycled glass (cullet) and fluxing agents are added. The material is melted to 1100°C in an electric furnace, and then forced through precision drilled holes in high speed spinning disks, to form fibres. Binding products and other additives required to give specific characteristics to different products are then added as fibres fall onto moving collection belts. The glasswool mat is then polymerized, heated and passed through compression rollers where it is cured to provide a product of the required thickness and density.

Application

- ★ Sound proof and fire proof used for wall and roof ;
- ★ Heat preservation for steel structure building ;
- ★ Heat Insulation for wall and roof to save energy;
- ★ For indoor partition wall,and train compartment.



Product Features

Excellent thermal insulation;
Excellent sound absorption and soundinsulation capability;
Green thermal insulation materialsand no harm for body;
the production can be arbitrary cutting and convenient for construction

Technical Data

Item	Measured value
Bulk density(kg/m³)	12~48
Average diameter of fibers(μm)	4.0~6.0
Moisture resistivity(%)	> 98
Thermal conductivity (W/m.k)	0.036
Incombustibility	Up to standard (Grade A)
Sound absorption coefficient	1.03 product reverberation positioning 24kg/m³ 2000HZ
Max. working temperature(℃)	410

Standard Specification

Product name	Glass Wool Blanket
Density(Kg/m³) (1Lbs/ft³=16kg/m³)	12-48
Thickness(mm)	50-100
Width (mm)	1200
Size(mm)	20000*1200*50/15000*1200*75 5000*1200*100

Other size and density may be available on reques

Packages

The finished products are then packaged under high compression to reduce the volume and cost of storage and transportation.

Glass wool Board

Glass wool board is a deep-processing product of glass wool. Its raw material is semi-finished glass wool board, which is made by polishing, spraying, sticking, processing and other processes.

Product Features

Unique technology, after compressive packing, the rebound degree is up to 99.2%;
Soft and long glass fibers can maximally lessen flying catkins in the construction;
Antisepsis, ageing resistance, anticorrosion, ensure a healthy environment;
Low moisture absorption and stable physical properties;
Sound absorption and noise reduction;
Easy for construction and cut at will;
Grade A1 incombustible materials;

Application

- ★ Sound proof and fire proof used for wall and roof ;
- ★ Heat preservation for steel structure building ;
- ★ Heat Insulation for wall and roof to save energy;
- ★ For indoor partition wall,and train compartment.

Standard Specification

Product name	Glass Wool Board
Density(Kg/m³) (1Lbs/ft³=16kg/m³)	24-96
Thickness(mm)	25-100
Size(mm)	1200*1200/1200*600
Temperature(℃)	-120℃~400℃ -184℉~752℉

Other size and density may be available on reques

Packages

Glass wool boards are packaged by Plastic bag.

Technical data

Item	Indicator
Bulk density(kg/m³)	24~96
Average diameter of fibers(m)	4.0~6.0
Moisture resistivity(%)	> 98
Thermal conductivity (W/m.k)	0.036
Incombustibility	Up to standard (Grade A)
Sound absorption coefficient	1.03product reverberation positioning 24kg/m³ 2000HZ
Max. working temperature(℃)	410

Calcium Silicate Board

Calcium silicate board is a kind of board dominated by silicic and calcic materials and made by such manufacturing process as pulping, shaping, steam curing, drying and post processing etc.

insulation has taken the initial to create the high temperature resistant calucium sili-cate heat insulation material which has quartz sand and lime as the basic materials and made by using the dynamic hydrothermal synthesis method. Its highest working temperature is 1050 °C, with extremely high void ratio and currently,it is one of the inorganic rigid heat insulation materials that have the smallest volume and the lowest heat conductivity coefficient.

Technical Data

Product/Item	Insulation Calcium Silicate Board	
Classified Tem (°C)	1100°C/2012°F	650°C/1202°F
Max. working Tem. (°C)	1100	650
Density (kg/m³)	500±10%	250±10%
Bending Strength (Mpa)	≥0.5	0.25-0.3
Compressive strength at 5 deformation (Mpa)	≥0.9	0.5-0.6
Max.Thermal Conductivity Average Temp (w/m.k)	≤0.056	0.055-0.062
Max Linear Shrinkage (%) (1000°/H)	≤1.5	2
Size (mm)	1000*500/600*300 Thickness: 25-100	600*300/400*250 Thickness: 25-120
	customized size as customer`s request	

Advantages

Outstanding Waterproofing Performance no oil and water absorption enables the product to maintain stable insulating performanc;

High strength: in the condition of similar bulk density, it is the highest strength insulation material in inorganic hard insulation material ;

Heat resistance: no deformation in working temperature;

Thermal insulation: lower thermal conductivity than other hard block insulation material;

No asbestos: avoid various diseases caused by the asbestos fiber and other harmful substances;

Application

It can be widely used in in electric power, heat and other oil, chemical, metallurgical and other industries equipment, heat pipe, boiler body, kiln and so on. In recent years, widely used in thermal power plant heating pipe straight steel casing steel, plastic sets of steel, with glass fiber reinforced concrete composite insulation pipe etc.·

Calcium Silicate Pipe

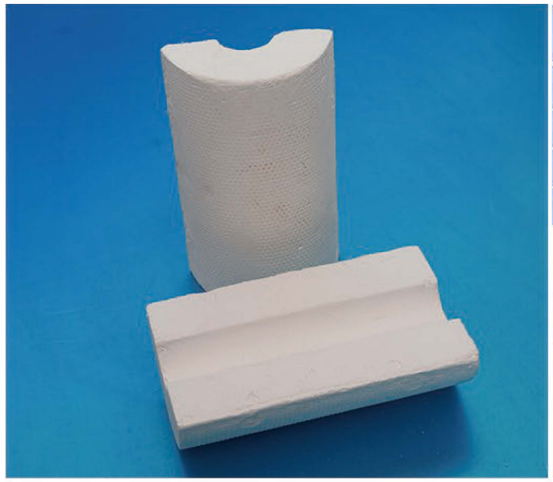
Asbestos-free pipe Calcium Silicate,also known as the porous calcium silicate pipe,is a fiber-reinforced calcium silicatepipe, made through mixing, heating, gelling, molding, autoclaving and drying processes.Calcium silicate pipe is a new type of rigid insulation material.

Advantages

Light weight, low thermal conductivity, high rupture and, compressive strengths, calcium silicate won't distort even in contact with water, with other features like long service life, sawing-worthiness, easy processing, non-toxics, non-corrosiveness to piping and equipment, etc.

Good durability;
Low thermal conductivity;
Light weight ,high specific strength;
High usability in construction;
Safe and healthy;
Waterproof.

Technical Data



Product / Item	Insulation Calcium Silicate Pipe	
Type	Standdard Calcium Silicate (1000°C)	Common Calcium Silicate (650°C)
Max. working Tem. (°C)	1000	650
Density (kg/m³)	220/300	135/170
Flexural strength(min)	0.35-0.4	0.2-0.3
Max.Thermal Conductivity (w/m.k)	0.062-0.07	0.049-0.058
Max Linear Shrinkage (%)	2	2
Size (mm)	Inside diameter: above 22 Length: 610 Thickness : above25	
	customized size as customer`s request	

Application

Mainly used as insulation for thermal equipment and piping in the power, chemical, metallurgy, petrochemical, textile and light industries, as well as insulation for building, ship and train.

High alumina cement

High alumina cement is a hydraulic cementitious material made from clinker with an alumina content of about 50%, mainly calcium aluminate, also known as aluminate cement. The CAH10 and C2AH8 (hexagonal crystal system) generated by hydration are flaky and needle-shaped crystals, which alternately adhere to each other, overlap and combine to form a hard crystalline connector, giving the cement high strength. The aluminum hydroxide gel fills the pores of the crystal skeleton, making the cement form a relatively dense structure. After 5-7 days, the amount of hydrates rarely increases, so the early strength of high alumina cement increases rapidly.

Application

Formulated unshaped refractory materials

Prepare cement for special purposes such as gypsum alumina expansion cement and self-stressing cement.

Special needs projects such as emergency construction, emergency repair, sulfate corrosion resistance and winter construction

Product features

Early strength characteristics: Its early strength increase rate far exceeds that of fast-hardening Portland cement, making it suitable for emergency repair projects.

Strong resistance to sulfate corrosion: the hydration process does not precipitate free calcium hydroxide but generates aluminum hydroxide gel, forming a protective film on the surface of the particles.

Good high temperature resistance: High alumina cement can be used as a cementing material for heat-resistant concrete and configured into heat-resistant concrete.

Technical Data

Product Type	Aluminum content	initial solidification time	final setting time	Compressive strength	Working temperature
	≥50%	100min	220min	60Mpa	< 1300℃
	≥50%	100min	230min	70Mpa	< 1300℃
	≥50%	120min	240min	80Mpa	< 1300℃
	≥70%	2800min	330min	70Mpa	< 1500℃