

LEX-FIBER®

**REFRACTORIES
FOR INSULATION**



CERAMIC FIBER BLANKET

Introduction

LEX Ceramic fiber blanket is made from high quality Gao-ling clay, high purity alumina and silica oxides by spun or blown process. It is asbestos free. No chemical binder is added. Double-side needling provides blanket with great tensile or handing strength for easy installation.



Product Characteristics

- ◆ Low thermal conductivity
- ◆ High tensile strength
- ◆ Resilient to thermal shock
- ◆ Corrosion resistance

Typical Applications

- ◆ Petrochemical process heater refractory fiber lining
- ◆ General furnace backup insulation
- ◆ Heat treating furnace or intermittent (shuttle) kiln hot face lining
- ◆ Electrical insulator
- ◆ Heat seals for kiln car or furnace door
- ◆ High temperature acoustic
- ◆ Fire protection

		LX-1260STD	LX-HP	LX-1350	LX-1430	LX-1500
Temperature Grade	°C	1260	1260	1350	1430	1500
	°F	2300	2300	2460	2600	2732
Recommended Operating Temp.	°C	1050	1100	1200	1300	1350
	°F	1920	2010	2190	2460	2462
Available Density	Kg/m ³	80,96,128,160				
Color		White	White	White	White	Light Green
Thermal Shrinkage (24hrs) 128Kg/m³	%	≤3	≤3	≤3.5	≤3.5	≤2.0
	°C	1150	1250	1150	1250	1400
Thermal Conductivity (W/m.k) 128Kg/m³	800°C	0.152	0.151	-	-	
	1000°C	0.17	0.22	0.16	0.15	
	1200°C	-	-	0.39	0.31	0.30
Chemical Composition						
Al ₂ O ₃	%	44	45-47	51-53	36-38	72
Al ₂ O ₃ +SiO ₂	%	96.5	98	99	≤84	99.5
ZrO ₂	%	-	-	-	≥15	
Cr ₂ O ₃	%					2.8
Size	mm	Width: ≤1220 Thickness: 6-60(Only STD and HP blanket has 6mm.) (Non-standard sizes are available upon request)				

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

ALUMINA FOIL COVERD CERAMIC FIBER BLANKET

Introduction

LEX STD/HP blanket is specially-developed flexible encapsulated insulation wrap designed for the fire protection of ductwork within all types of buildings meeting various international and national building code and fire test standard performance requirements.

Ductwork in buildings is insulated to prevent fire spread within a building through the duct or to ensure the duct function is maintained when exposed to a fire. Fire may occur either inside or outside the duct. Stringent fire tests exist worldwide to prove the effectiveness of ductwork fire insulation systems.



LEXFIBER Brand

Ductwork fire protection can be used for heating and ventilation, kitchen grease extraction and pressurisation ductwork whilst ancillary products and systems are also available for access doors, venting duct and plastic pipe protection.

Specialist technical advice on the correct LEXFIBER specification and system design appropriate to your region is available from your local office; simply get in touch for further information.

◆ Product Characteristics

- ◆ 1- and 2-hour fire-rated enclosure
- ◆ Zero clearance to combustibles at all locations on
- ◆ Saves weight, space, labor
- ◆ High-temperature, biosoluble insulation
- ◆ GREENGUARD listed for Microbial Resistance
- ◆ Alternate to fire-rated shaft blanket wrap
- ◆ Thin, lightweight single-layer system
- ◆ Durable foil-scrim covering

Typical Applications

LEX Duct Insulation ADS System consists of a single-layer applied directly on to the duct surface. Only encapsulated blanket should be utilized to ensure the outer surface of the insulation is protected. The insulation system may be installed at zero clearance to combustibles at all should be rolled out tautly before measuring and making any material cuts. Install insulation with a 3" minimum overlap on all joints. Seal cut edges with pressure-sensitive aluminum foil tape. The perimeter transverse overlap of adjacent blanket may be installed using any of the following three techniques.

Application Field:

- ◆ Fire Protection of kitchen grease extract and ventilation ductwork
- ◆ Access doors for fire rated ducts
- ◆ Fire Protection of dryer venting ducting
- ◆ Plenum Fire Protection for plastic pipe and cables

BIO-CERAMIC FIBER BLANKET

Introduction

LEX Bio-Ceramic fiber blanket is newly developed product which is friendly to human beings and the environment. Improved shot content make the blanket has good thermal conductivity and good performance during various applications.



Product Characteristics

- ◆ Improved shot content
- ◆ Improved thermal properties
- ◆ Improved tensile strength
- ◆ Improved compression and resilience

Typical Applications

- ◆ Petrochemical process heater refractory fiber lining
- ◆ General furnace backup insulation
- ◆ Heat treating furnace or intermittent (shuttle) kiln hot face lining
- ◆ Electrical insulator
- ◆ Heat seals for kiln car or furnace door
- ◆ High temperature acoustic
- ◆ Fire protection

Type		LEX-STDS
Classification Temperature	°C	1260
	°F	2300
Continuous Working Temperature	°C	1100
	°F	2012
Melting Point	°C	1310
	°F	2090
Bulk Density	kg/m ³	80, 96, 128
Fiber Diameter	µm	3~5
Shot Content	%	12
Color		white
Thermal Shrinkage 24hrs(%)	°C(%)	1100 1.0
	°F(%)	2012 1.0
Chemical Composition		
SiO ₂	%	65.39
CaO	%	27.1
MgO	%	6.52
Al ₂ O ₃	%	0.46
Fe ₂ O ₃	%	0.13

CERAMIC FIBER BOARD

Introduction

LEX Ceramic fiber board is manufactured in a wet vacuum forming process by blending the chopped ceramic fiber with inorganic or organic binders for excellent abrasive resistance at high temperature.



Product Characteristics

- ◆ Low thermal conductivity
- ◆ Excellent thermal shock resistance
- ◆ Low heat storage
- ◆ Resist most chemical attacks

Typical Applications

- ◆ Hot air duct lining
- ◆ Shuttle kiln with high gas velocity
- ◆ Laboratory furnace
- ◆ Kiln car insulation
- ◆ Die-cut high temperature seal

		LX-STD	LX-HP	LX-HA	LX-HZ
Temperature Grade	°C	1260	1260	1350	1430
	°F	2300	2300	2460	2600
Recommended Operating Temp.	°C	1000	1100	1200	1350
	°F	1830	2010	2190	2460
Available Density	Kg/m ³	240-400			
	lb/ft ³	15-25			
Color		White	White	White	White
Thermal Shrinkage (24hrs)	%	-3.3	-3.2	-3.6	-3.8
	°C	1200	1260	1350	1400
Thermal Conductivity (W/m.k) 128Kg/m³	800°C	0.136	0.128	0.120	0.114
	1000°C	0.152	0.150	0.143	0.146
	1200°C	0.190	0.178	0.160	0.158
Chemical Composition					
Al ₂ O ₃	%	44	45-47	51-53	36-38
Al ₂ O ₃ + SiO ₂	%	97-98.5	98-99	98.5-99	≤84
ZrO ₂	%	-	-	-	10-18
Size	mm	Length: ≤1500mm Width: ≤1200 Thickness: 3-100 (Non-standard sizes are available upon request)			

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

CERAMIC FIBER PAPER

Introduction

LEX Ceramic fiber paper is made through slurry, removing residue, mixing slurry, long-mesh shaping, vacuum dehydrating, drying, cutting and rolling etc



Product Characteristics

- ◆ Easy to cut, wrap or form
- ◆ Thermal shock resistant
- ◆ Excellent machine processing
- ◆ Low thermal conductivity
- ◆ Low heat storage
- ◆ High quality of insulation and sound insulation

Typical Applications

- ◆ High temperature gasket
- ◆ Furnaces backup insulation
- ◆ Thermal and electrical insulation for heaters
- ◆ Electrical switch box fire protection
- ◆ Refractory expansion joint
- ◆ Lining for aluminum casting molds
- ◆ Heat insulation for exhaust tubes and pipes
- ◆ Insulation for car field

		LX-STD	LX-HA	LX-HZ
Temperature Grade	°C	1260	1350	1430
	°F	2300	2450	2600
Recommended Operating Temp.	°C	1000	1200	1300
	°F	1830	2200	2370
Available Density	Kg/m ³	160-200	160-220	
	lb/ft ³	10-12.5	10-3.75	
Color		White	White	White
Binder Content	%	≤8	≤8	≤8
Thermal Shrinkage (24hrs)	%	≤0.7	≤0.6	≤0.4
	°C	1000	1000	1000
Thermal Conductivity (W/m.k)	400°C	≤0.1	≤0.1	≤0.08
	800°C	≤0.19	≤0.19	≤0.16
	1000°C	≤0.36	≤0.36	≤0.22
Chemical Composition				
Al ₂ O ₃	%	≥45	≥52	38-54
Al ₂ O ₃ +SiO ₂	%	≥97	≥97	82-90
ZrO ₂	%	-	-	10-18
Size	mm	Width: ≤1270 Thickness: 0.4-10 (Non-standard sizes are available upon request)		

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

CERAMIC FIBER MODULE

Introduction

LEX Ceramic fiber module is made of ceramic fiber blanket, which are stack folded to form a module with folded edges exposed. The module should be secured. Pre-cutting and Z block are both available.

Product Characteristics

- ◆ Fast and easy installation
- ◆ Lower heat storage and fuel costs
- ◆ Several anchor systems
- ◆ High tensile strength



Typical Applications

- ◆ Petrochemical process heater
- ◆ Ceramic firing kiln
- ◆ Backup insulation
- ◆ Heat treating furnace
- ◆ Cement rotary kiln
- ◆ Glass melting tank

		LX-1260 STD	LX-HP	LX-1350	LX-1430	LX-1500
Temperature Grade	°C	1260	1260	1350	1430	1500
	°F	2300	2300	2460	2600	2732
Recommended Operating Temp.	°C	1050	1100	1200	1300	1350
	°F	1920	2010	2190	2460	2462
Available Density	Kg/m ³	160-200				
	lb/ft ³	10-12.5				
Color		White	White	White	White	Light Green
Thermal Shrinkage (24hrs)	%	≤3	≤3	≤3.5	≤3.5	≤2.0
128Kg/m³	°C	1150	1250	1300	1350	1400
Thermal Conductivity (W/m.k) 128Kg/m³	800°C	0.152	0.151	-	-	
	1000°C	0.17	0.17	0.16	0.15	
	1200°C	-	-	0.39	0.31	0.30
Chemical Composition						
Al ₂ O ₃	%	44	45-47	51-53	36-38	72
Al ₂ O ₃ + SiO ₂	%	96	98	99	≤84	99.5
ZrO ₂	%	-	-	-	≥15	
Cr ₂ O ₃	%	-	-	-	-	2.8
Size	mm	Length: ≤600 Width: ≤300 Thickness: ≤300 (Non-standard sizes are available upon request)				
Anchoring Part		304# and 310# stainless steel Shape: butterfly, rhombus and angled				

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

CERAMIC FIBER VENEERING MODULE

Introduction

LEX Ceramic fiber veneering module is made of ceramic fiber cut and compressed using special techniques. They can be applied over a variety of refractory surfaces.

Product Characteristics

- ◆ Low heat storage
- ◆ Low thermal conductivity
- ◆ Resistance sound-absorbing capacity
- ◆ Excellent sound-absorbing capacity
- ◆ High heat reflection rate
- ◆ Ability to withstand gas flow
- ◆ Even fiber diameter
- ◆ Easily installed over existing refractory surface



Typical Applications

- ◆ Heating furnace
- ◆ Thermal treatment furnace
- ◆ Shuttle kiln
- ◆ Tunnel kiln
- ◆ Roller kiln
- ◆ Furnace door, furnace cover sealing

Typical product properties:

Product Item	LX-1430	LX-1500
Color	Pure White	Light Green
Melting point (°C)	1760	1760
Classification temp. (°C)	1430	1500
Service temp. (°C)	1250	1300
Density (kg/m³)	160-210	160-210
Chemical composition		
Al ₂ O ₃	35	43
Al ₂ O ₃ +SiO ₂		
ZrO ₂	15	
Cr ₂ O ₃		2.8
Al ₂ O ₃ +SiO ₂ (Cr ₂ O ₃)	99	99
Thermal conductivity	at mean 800°C of: W/mk 0.26	at mean 1000°C of: W/mk 0.26
Permanent lin. Change of fiber	After 24h at 1400°C % Max -4.0	After 24h at 1400°C % Max -4.0

CERAMIC FIBER BLOCK MODULE

Introduction

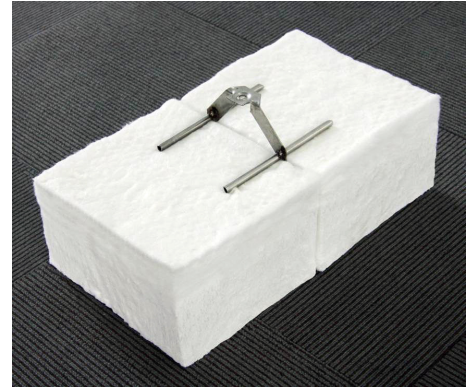
LEX Ceramic fiber block module is developed by advanced technical production way. It provide better solutions for heating resistant and energy-saving problems of high temperature furnaces.

Product Characteristics:

- ◆ Excellent thermal insulation performances
- ◆ Excellent chemical stability
- ◆ Easy to install and firm structure
- ◆ Good thermal shock resistance
- ◆ High fiber index

Typical Applications:

- ◆ Petrochemical process heater
- ◆ Heat treating furnace
- ◆ Ceramic firing kiln
- ◆ Cement rotary kiln
- ◆ Backup insulation
- ◆ Glass melting tank



CERAMIC FIBER GASKET

Introduction

LEX Ceramic fiber gasket is made from ceramic fiber paper. The gasket is supplied in a wide range of thicknesses and shapes. It's also could be produced as special drawings and specifications.

Product Characteristics

- ◆ Low thermal conductivity
- ◆ Design freedom
- ◆ Low specific heat
- ◆ Resilient to thermal shock



HIGH TEMPERATURE TEXTILE

LEX Ceramic fiber textiles are high performance thermal textiles made of high quality ceramic fiber. The textiles range is composed of yarn, cloth, tape, rope, braided packing, sleeve, etc.

They are reinforced with E-glass fiber or chrome-nickel steel wire. E-glass fiber reinforcement is used where metal is undesirable, especially when using the textiles as a dielectric, while the steel wire reinforcement provides maximum strength at elevated temperatures. In applications where the tensile strength is important, temperature limits of inserted materials should be considered.



LEX ceramic fiber textiles contain carrier fiber to facilitate the carding process. The textiles normally contain 16-20% rayon fiber which will burn out at high temperature, but has no effect on the properties of the products.

Service Temperature Limit	°C	1260
	°F	2300
Melting Point	°C	1760
	°F	3200
Temperature Limit of Insert	°C	650—Glass 1100—Stainless steel
	°F	1202—Glass 2012—Stainless steel
Fiber diameter	µm	3-4
Thermal Shrinkage (24hrs) 128Kg/ m³	%	≤3
	°C	1150
Thermal Conductivity 1000°C(1832°F)	(W/m.k)	0.18
Linear shrinkage 1100°C(2012°F)x 24hr	%	3
Loss on ignition	%	18
Electrical	—	Glass Non-Conductive Stainless Steel Conductive
Chemical Composition		
Al ₂ O ₃	%	47-49
Al ₂ O ₃ + SiO ₂	%	99

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

CERAMIC FIBER TWISTED ROPE

Introduction

LEX Ceramic fiber twisted rope is fabricated from ceramic fiber yarn twisted to form a cord of specified diameters, with glass filament or chrome-nickel wire inserted to provide high strength at elevated temperatures. It can be performed as radiant tube packing for heat-treated furnaces, expansion joint packing, seals for stoves and ovens, bulb in tadpole gaskets, wick for oil burning apparatus, fireproof wrap and insulation.

Diameter: 3mm-50mm (1/8"-2")

Option:

3-Ply twisted rope



3-Ply sliver twisted rope



Tadpole



CERAMIC FIBER YARN

Introduction

LEX Ceramic fiber yarn is manufactured from high quality alumina-silica ceramic fiber and has been mechanically twisted to give it tensile strength. The yarn is available as E-glass or chrome-nickel wire reinforced yarn from 330 Tex to 2500 Tex in single, two or three plies.

Product Characteristics

- ◆ High temperature gaskets
- ◆ Making cloth, tape, rope, etc
- ◆ Sewing thread for high temperature textiles



CERAMIC FIBER ROUND BRAIDED PACKING

Introduction

LEX Ceramic fiber round braided packing is dense, resilient, high performance ceramic fiber material fabricated from E-glass or chrome-nickel steel wire inserted ceramic fiber yarn which is braided around a core of ceramic fiber cord to form a packing in round section.

Diameter: 4mm-100mm (4/25"-4")



CERAMIC FIBER SQUARE BRAIDED PACKING

Introduction

LEX Ceramic fiber square braided packing is dense, resilient, high performance ceramic fiber material fabricated from E-glass or chrome-nickel steel wire inserted ceramic fiber yarn which braided around a core of ceramic fiber cord to form a packing in square section.

Diameter: 6mm-100mm (1/4"-4")



CERAMIC FIBER CLOTH

Introduction

LEX Ceramic fiber cloth is a high performance thermal cloth manufactures from ceramic fiber yarn. It can be used as protection against high temperature, barrier to prevent fire spreading, welding curtains and fire blankets, furnace curtains, high temperature electricity insulation, cable and fuel line protection, fireproof wrap, etc.

Thickness: 2mm-10mm (2/25"-3/8")



CERAMIC FIBER TAPE

Introduction

LEX Ceramic fiber tape is manufactured from high quality alumina-silica fiber yarn .It can be used as protection against high temperature, high temperature electrical insulation, cable and fuel line protection, fireproof wrap, gasket and seal, etc.

Thickness: 2mm-10mm (2/25"-3/8")

Width: 20mm-1000mm (3/4"-40")

Option: Ladder Tape

The ceramic fiber ladder tape without warp yarn in the center is used for drilling through the bolt hole, etc.



CERAMIC FIBER BULK

Introduction

LEX Bulk ceramic fibers are made from high quality Gao-ling clay, high purity alumina and silica oxides. The fibers are strong, high purity fibers unaffected by chemicals except for hydrofluoric and phosphoric acids and strong alkalies.

Product Characteristics

- ◆ Low thermal conductivity
- ◆ High heat resistance
- ◆ Resilient to thermal shock
- ◆ Corrosion resistance

Typical Applications

- ◆ Manufacturing of blanket, paper, board, etc
- ◆ Loose insulating fill for crowns and walls of kilns and furnaces
- ◆ Packing expansion joints in refractory constructions

Type: 1260°C STD/HP, 1350°C HA, 1430°C HZ



VACUUM FORMED SHAPE

Introduction

LEX Vacuum formed shapes are vacuum formed from wet slurry in a variety of specially engineered formulations. It is manufactured from CMAX fiber and carefully selected organic and inorganic binders.

Except the standard shapes such as tubes, tap hole cones, burner block and kiln car blocks, it's also could be produced as special drawings and specifications.

Product Characteristics

- ◆ Low thermal conductivity
- ◆ Light weight
- ◆ Flame resistance
- ◆ Design freedom



SUPER COATING

Introduction

LEX Super coating series products are putty like paste consisted of ceramic fiber and refractory additive dispersed in a sticky like water based inorganic and organic binder.

LEX Super coating series products adhere to ceramic fiber module surface to postpone fiber vitrification. After dry at suitable temperature, the coating will be hard and erosion resistant.

Product Characteristics

- ◆ Postpone fiber vitrification
- ◆ Chemical erosion resistance
- ◆ Hot gas erosion resistance
- ◆ Flame impingement resistant



		LX-1200	LX-1200S	LX-1430	LX-1600
Wet Density	Kg/m ³	1300	1300	1300	1300
Dry Density	Kg/m ³	600	600	600	600
Color		White	White	White	White
Max Service Temp.	°C	1150	1100	1300	1600
Modulus of Rupture	Mpa	8	8	8	8
Cold Compressive Strength	Mpa	0.4	0.4	0.4	0.4
Thermal Shrinkage (24hrs)	%	2	2	1.8	1.5
	°C	1200°C×24hrs	1200°C×24hrs	1400°C×24hrs	1500°C×24hrs
Chemical Composition					
Al ₂ O ₃	%	40	-	55	80
SiO ₂	%	57	83	37	19
ZrO ₂	%	-	-	8	-
MgO		-	2.5	-	-
CaO		-	14.5	-	-
Cr ₂ O ₃	%	-	-	-	-

MICROPOROUS BOARD

Introduction

LEX Microporous board is rigid finishing from microporous technology, with opacified blend of filament reinforced fumed silica, which provides a superb thermal performance

Product Characteristics

- ◆ Extremely low thermal conductivity
- ◆ High thermal stability
- ◆ Easy to handle
- ◆ Resist most chemical attacks
- ◆ Non combustible
- ◆ High compressive strength
- ◆ Environment protection
- ◆ No harmful inhalable fibers
- ◆ Free of organic binders

Typical Applications

- ◆ Back-up insulation in industrial furnaces
- ◆ Fuel cell(SOFC)/thermal batteries
- ◆ Aluminium Launderers/Smelter etc
- ◆ Glass and ceramic industry
- ◆ Petrochemical industry (cracking furnace, reformer)
- ◆ Black box and VDR (data recorder)
- ◆ Data loggers

Working & Processing

Lex Microporous board can be shaped both manually and with stationary wood processing machinery. They can be cut, sawn, drilled and puched. The boards can be fixed in place with glue or by mechanical means such as anchors, pins and clips.



◆ Cement Rotary Kiln



◆ Ladles



◆ Torpedo Ladle



◆ Tundish

Technical Specification					
Classification Temperature Long time exposure	°C	1000 950	1100 1050	1200 1150	
Nominal Density	kg/m ³	280±20	300±20	450-550	
Compressive Strength @10% deformation	MPa	0.33	0.67	0.80	
Thermal Conductivity					
	200 °C	W/mK	0.022	0.024	0.027
	400 °C	W/mK	0.025	0.028	0.032
	600 °C	W/mK	0.028	0.037	0.039
	800 °C	W/mK	0.033	0.044	0.045
Specific Heat Capacity					
	200 °C	KJ/kgK	0.86	0.93	0.95
	400 °C	KJ/kgK	0.94	0.96	0.97
	600 °C	KJ/kgK	0.96	1.02	1.05
	800 °C	KJ/kgK	0.99	1.07	1.08
Linear Shrinkage					
	24h full soak @ 950 °C	%	≤2.5	≤0.5	≤0.5
	24h full soak @ 1050 °C		—	≤2.5	≤2.5
	24h full soak @ 1150 °C		—	—	≤3.5

Dimension & Size Availability		
Product Type	Length & Width (mm)	Thickness (mm)
S100 (Nude/Alu-Foil/PE/Fibre Paper)	1200*1100	10-50
S100/Flat Edge (E-Class Fibre Cloth)	1200*1100	10-50
S100/Curved Edge (E-Class Fibre Cloth)	2450*650	3-35
Coverings Available	Nude / Alu-Foil / Thin Fibre Paper / PE Film / E-Class Fibre Cloth	

MICA ROLL

Introduction

LEX Flexible mica roll is made from high quality phlogopite mica paper or synthetic mica paper, using alkali free glass fiber cloth as reinforced material, bonded with silicon resin. After high temperature baking, cutting and processing, our finished mica rolls are available in roll type.



Product Specification

- ◆ Width: 20-1000mm
- ◆ Length: 10-500m
- ◆ Central Spindle: Customization

Typical Applications

- ◆ Steel industry
- ◆ Metallurgy frequency furnace, refining furnace, intermediate frequency furnace
- ◆ Electric arc furnaces, calcium carbide furnace, submerged arc furnace

PHLOGOPITE MICA ROLL ---0.4*1000*25000mm	
Thickness (mm)	0.42
Nominal weight(g/m ²)	695
Mica paper content (g/m ²)	525
Glass fiber content (g/m ²)	67
Tensile strength (N/10mm)	267
Binder content (%)	10.3
Dielectric strength (kv/layer)	7.0
Appearance: bonded evenly, no bubbles, wrinkles, separation, no mica paper break and surface is clean and tidy.	

FLEXIBLE MICA SHEET

Introduction

LEX Flexible mica sheet is made of high quality mica paper mixed with non-reinforced silicone after pressing and backing. It is used as thermal and electrical insulating parts in hair dryer, electric iron, electric heating bar and other home appliances. And it can be applied to high heat resistant grade metallurgy industry equipment like middle frequency furnace, arc furnace, etc. It is also used as gasket materials in automotive industry instead of asbestos materials.

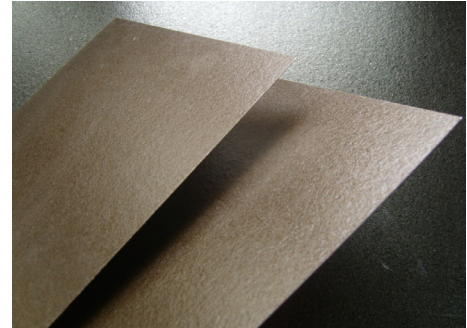
Product Characteristics

- ◆ Excellent heat resistant property to 800°C
- ◆ Outstanding electrical insulation
- ◆ Excellent winding performance
- ◆ Eco-friendly, low smoke and odor when heated

RIGID MICA SHEET

Introduction

Lex Mica sheet consists of approximately 90% muscovite mica paper or phlogopite mica paper, impregnated with high temperature resistant silicone resin. It is used of thermal and electrical insulation in microwave ovens, electric toasters, hair dryers, irons, curlers, electric hot combs, strip heaters, baseboard heaters and other home appliances.



Product Characteristics

- ◆ Excellent heat resistant property to 1000 °C
- ◆ Outstanding electrical insulation
- ◆ Fine bending strength and processability
- ◆ Eco-friendly, low smoke and odor when heated, even smokeless and odorless.

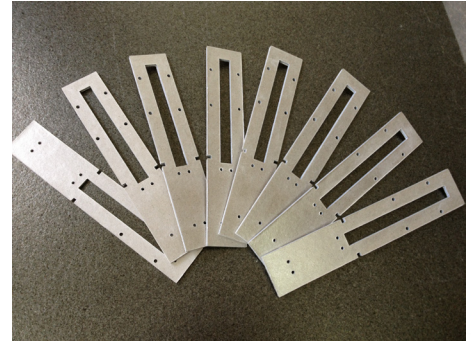
Technical Data

ITEM		UNIT						
Hardness			Rigid	Rigid	Rigid	Rigid	Flexible	Flexible
Mica paper			Muscovite	Phlogopite	Muscovite	Phlogopite	Muscovite	Phlogopite
Thickness		mm	0.1-2.0	0.1-2.0	3.0-50	3.0-50	0.1-2.0	0.1-2.0
Mica content		%	≥90	≥90	>88	>88	≥90	≥90
Bond Content		%	<10	<10	<12	<12	<10	<10
Density		g/m ³	1.6~2.45	1.6~2.45	2.1~2.4	2.1~2.4	1.6~2.45	1.6~2.45
Heat Resistant	Continuous	°C	500	700	500	700	500	700
	Peak	°C	700	900	700	900	700	900
Heat loss at 500 °C		%	<1	<1	<1	<2	<1	<1
Heat loss at 700 °C		%	<2	<2	<1	<2	<2	<2
Flexural strength		Mpa	>160	>140	—	—	<1	<1
Water absorption 24h/23 °C		%	<1	<1	<1	<2	—	—
Dielectric strength		KV/mm	>20	>20	>15	>15	>15	>15
Volume Resistivity	23 °C	Ω.cm	>10 ¹⁷	>10 ¹⁷	>10 ¹⁷	>10 ¹⁷	—	—
	500 °C	Ω.cm	>10 ¹²	>10 ¹²	>10 ¹²	>10 ¹²	—	—
Smoking Test		s	<4	<4	—	—	—	—

MICA PARTS

Introduction

LEX Mica parts are made from high quality rigid mica sheet with excellent mechanical strength and electrical properties. After sawing, punching, milling, lathing, drilling and other processing methods, our mica parts are available in mica stamping parts, mica gasket, mica insulation flange and other special parts with different specification according to customer's requirements.



Product Characteristics

- ◆ Excellent heat resistance and electrical insulation property
- ◆ High dielectric strength, breakdown voltage is up to 20KV/mm
- ◆ Excellent mechanical strength and bending strength
- ◆ Eco-friendly, low smoke and odor when heated, even smokeless and odorless

Typical Applications

- ◆ All kinds of home appliance (toaster, microwave oven, fan heater, hair dryer, electric iron etc)
- ◆ Steel Industry
- ◆ Metallurgy
- ◆ Insulating gasket

MICA TAPE

Introduction

LEX Flexible mica tape is made from high quality phlogopite mica paper, synthetic mica paper or calcined mica paper, using alkali free glass fiber cloth or PE film as single side or double sides reinforced material, boned with silicon resin. After high temperature baking, cutting and processing, our finished mica tapes are available in disk type or spool type.



Product Specification

- ◆ Width: 5-1000mm
- ◆ Length: 300-10000m
- ◆ Paper Core: 52mm, 76mm, 82mm, 105mm

MICA PAPER

Introduction

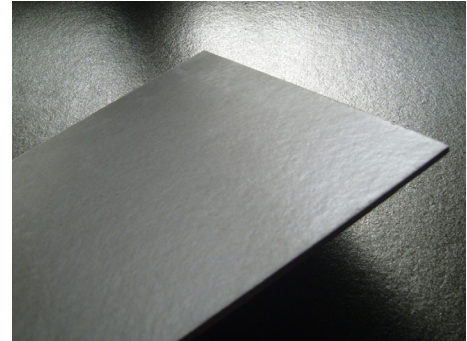
LEX Mica paper is the continuous reeled paper which is made from high quality muscovite, phlogopite, synthetic or calcined mica material, with mechanical pulping methods.

Product Characteristics

- ◆ Excellent electric function
- ◆ Fine tensile strength
- ◆ Excellent insulating property
- ◆ Good resin penetration and air permeability
- ◆ Produced within close tolerances

Typical Applications

- ◆ Steel industry
- ◆ Metallurgy frequency furnace, refining furnace, intermediate frequency furnace
- ◆ Electric arc furnaces, calcium carbide furnace, submerged arc furnace



CERAMIC MICA ROLL ---2.5*1000*25000mm	
Thickness (mm)	2.45
Mica content (%)	34
Volatile matter content (%)	0.52
The longitudinal tensile strength (N/10mm)	210
Transverse tensile strength (N/10mm)	120
Resin content (%)	16.2
Dielectric strength (kv/layer)	5.2
Appearance: bonded finely, no bubbles, wrinkles, separation, no mica paper break and no obvious crack after ceramic paper bending, surface is clean and tidy.	

INSULATING FIREBRICK

Introduction

LEX Insulating firebricks are classified under temperature between 1100°C to 1700°C, manufactured from high purity alumina clay.

Application

LEX Insulating firebricks can be used as a hot face lining directly exposed to the heat or as a backup insulation layer in iron and steel mills, non-ferrous foundries, petrochemical, ceramic, glass.

Product Characteristics

- ◆ Light weight and low thermal conductivity
- ◆ Low iron and impurities
- ◆ Low heat storage
- ◆ High thermal shock resistance



GJM SERIES INSULATING FIREBRICK

Physical Properties		LJM20	LJM23	LJM25	LJM26	LJM28	LJM30	LJM32
Classification Temperature	°C	1100	1260	1350	1430	1540	1600	1760
	°F	2012	2300	2462	2606	2804	3006	3200
Bulk Density (ASTM C134-84)	g/cm ³	0.52	0.52	0.8	0.8	0.9	1.03	1.25
	lb/ft ³	32	32	50	50	56	64	78
Cold Crushing Strength (ASTM C93-84)	Mpa	0.8	1.2	2	2	2.6	2.8	3.4
	lb/in ²	114	170	284	284	370	398	484
Modulus of Rupture (ASTM C93-84)	Mpa	0.6	0.9	1.2	1.5	1.6	1.7	2
	lb/in ²	85	128	170	218	232	247	290
Permanent Liner Change (24hours) (ASTM C210-85)	%	-0.1	-0.2	-0.5	-0.5	-0.6	-0.7	-0.8
	°C	1070	1230	1350	1400	1510	1620	1730
Thermal Conductivity (W/m.k) (ASTM C182-83)	400°C	0.17	0.17	0.24	0.25	0.3	0.4	0.49
	600°C	0.19	0.19	0.28	0.27	0.32	0.42	0.5
	800°C	0.22	0.22	0.32	0.3	0.35	0.44	0.51
	1000°C	0.24	0.25	0.37	0.33	0.37	0.45	0.53
	1200°C	—	—	—	0.35	0.39	0.47	0.55
Al ₂ O ₃	%	45	45	50	55	65	72	76
Fe ₂ O ₃	%	0.9	0.9	0.8	0.7	0.6	0.5	0.5
SiO ₂	%	50	50	45	42	32	26	22

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

B SERIES INSULATING FIREBRICK

Physical Properties		B-1	B-2	B-3	B-4	B-5	B-6	B-7
Reheating Shrinkage less than 2%	(°C)	900	1000	1100	1200	1300	1400	1500
Bulk Density	g/cm ³	0.70	0.70	0.75	0.80	0.80	0.90	1.00
Cold Crushing Strength	kg/cm ²	25	25	25	25	25	30	30
Thermal Conductivity 350°C	(W/m.k)	0.17	0.18	0.20	0.22	0.23	0.27	0.31

C SERIES INSULATING FIREBRICK

Physical Properties		C-1	C-2	C-3
Reheating Shrinkage less than 2%	(°C)	1300	1400	1500
Bulk Density	g/cm ³	1.10	1.20	1.25
Cold Crushing Strength	kg/cm ²	50	70	100
Thermal Conductivity 350°C	(W/m.k)	0.30	0.38	0.45

INSULATING FIRE MORTAR

Introduction

LEX Insulation fire mortar is made from the mixture of refractory powder and organic or inorganic binding agents, which is to match the use of the insulating fire brick.

Product Characteristics

- ◆ Excellent water retentivity
- ◆ Convenient for construction
- ◆ Small heating linear shrinkage after drying
- ◆ Stable chemical properties

Application:

- ◆ The laying of refractory bricks



Physical Properties		LJM Series
Classification Temperature	°C	1500
	°F	2730
Dosage	g/cm ³	2.2-2.3
	lb/ft ³	280-340
Consistency	mm	160
Reheating Liner Change (3 hours)	%	-0.3
	°C	1400
Flexural Bond Strength (24hours) Mpa	110°C	2
	1100°C	4
Al ₂ O ₃	%	≥65

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

LIGHTWEIGHT CASTABLE

Introduction

LEX Lightweight castable is made from lightweight aggregate of lightweight ceramic grains and sand grog and floating beads, mixed with binding agent of aluminate cement and superfine powder, having different aggregates of different materials to meet the design requirements.

Product Characteristics

◆ High strength ◆ Excellent heat-insulation ◆ Good wear resistance ◆ Small reheating liner change

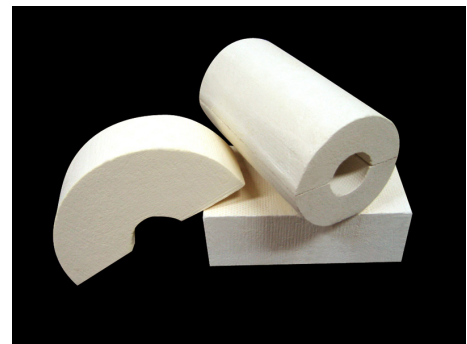
Application

◆ Chimney linings and heat-insulating ◆ Wear proof layers of the reactor-generator system

Physical Properties		LC-1.4	LC-1.2	LC-1.0	LC-0.9	LC-0.8
Classification Temperature	°C	1200	1100	1100	1000	1000
	°F	2190	2010	2010	1830	1830
Bulk Density (g/cm ³)	110°C×24h	1.4	1.2	1.0	0.9	0.8
	815°C×3h	1.3	1.1	0.9	0.8	0.7
Compressive Strength (Mpa)	110°C×24h	12	10	7	4.5	4
	815°C×3h	10	8	6	4	3
Modulus of Rupture (Mpa)	110°C×24h	3	2	1.5	1.0	0.8
	815°C×3h	2.5	1.5	1.0	0.8	0.5
Permanent Liner Change (%)	815°C×3h	0.2	0.2	0.2	0.2	0.2
Thermal Conductivity (W/m.k)	350°C	0.35	0.3	0.25	0.23	0.21

CALCIUM SILICATE PIPE

Physical Properties		LX-650°C
Bulk Density	Kg/m ³	220±10%
Modulus of Rupture	Mpa	≥0.3
Thermal Conductivity	W/m.k	≤0.062
Classification Temperature	°C	650
Linear Shrinkage	%	≤2

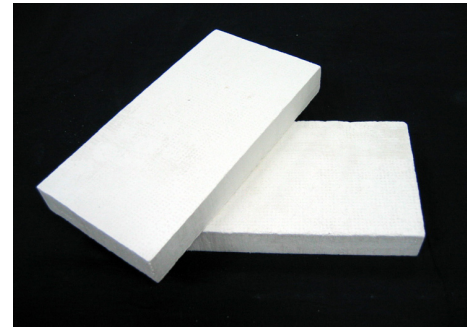


Size: Length: 600mm(±4mm), I.D.: 25mm-3600mm (+1-5mm), Thickness:40-100mm(+3,-1.5mm)
Special size is available as per customer's request.

CALCIUM SILICATE BOARD

Introduction

LEX Calcium silicate products are classified under temperature between 650°C to 1100°C, it's an asbestos-free thermal insulation product.



Product Characteristics

- ◆ Low thermal conductivity
- ◆ High thermal insulation value
- ◆ High strength
- ◆ High strength

Application

- ◆ Reheating furnace
- ◆ annealing furnace
- ◆ transfer ladle
- ◆ rotary kiln
- ◆ glass tank
- ◆ shuttle kiln
- ◆ tunnel kiln
- ◆ aluminum melting and holding furnace

STANDARD TYPE

Physical Properties		650°C		1000°C				1100°C
Bulk Density (±10%)	Kg/m ³	170	220	170	200	230	250	250
Modulu of Rupture	Mpa	≥0.25	≥0.3	≥0.25	≥0.35	≥0.5	≥0.55	≥0.5
Thermal Conductivity	W/m.k	≤0.052	≤0.056	≤0.048	≤0.05	≤0.056	≤0.058	≤0.058
Clasification Temperature	°C	650	650	1000	1000	1000	1000	1100
Linear Shrinkage	%	≤2 (650°C×16h)		≤2 (1000°C×16h)				≤2 (1050°C×3h)

Size: Length: 400-1220mm(±4mm), Width: 250-1220mm(±3mm), Thickness:25-120mm (+3,-1.5mm)

HIGH PURE AND HIGH STRENGTH TYPE

Physical Properties		High Pure Type		High Strength Type	
		LX-G	LX-C		
Bulk Density	Kg/m ³	800±10%	800±10%	800-1000 ±10%	
Modulu of Rupture	Mpa	≥7	≥7	≥7	
Thermal Conductivity	W/m.k	≤0.14	≤0.16	≤0.13	
Classification Temperature	°C	1000	1000	1000	
Working Temperature	°C	850	850	850	
Linear Shrinkage	Length, Width	%	0.4 (850°C×12h)	0.25 (850°C×12h)	1.5 (1000°C×3h)
	Thickness	%	1.5 (850°C×12h)	1.5 (850°C×12h)	1.5 (1000°C×3h)

High pure type: size: Length: 1000-1220mm(±4mm), Width: 500-1220mm(±4mm), Thickness:25-100mm(+2,-1.5mm)

Special size is available as per customer's request. G board with glass fiber, C board with carbon fiber.

High strength type: size: Length: 2300-2500mm(±5mm), Width: 1220mm(±4mm), Thickness:25-50mm(+3,-1.5mm)

COLD DRAW LOW CARBON STEEL FIBER

Introduction

LEX Low carbon steel fiber is used as a replacement for traditional reinforcement in various concrete applications such as: slab-on-ground, precast and shotcrete. With carbon steel fibers you can limit micro-cracking, expect excellent concrete strength and lower costs.

Product Characteristics:

- ◆ Save project cost
- ◆ Improve refractories performance
- ◆ Improve refractories durability

Typical Applications:

- ◆ Castable project
- ◆ Industrial furnaces
- ◆ Refractory products
- ◆ Precast



MELT EXTRACT STEEL FIBER

Introduction

LEX Melt extract stainless steel fibers are spun directly from the melt using the company's advanced Melt Extraction (ME) and Melt Overflow (MO) processes. Rapid cooling of the fiber during manufacture (equivalent to 50,000 per second) "freezes" the metallurgical structure, capturing it in an optimum state to resist high temperature corrosion - a state which is impossible for conventionally cast steel to match. The processing maximizes the effective distribution of the primary nickel and/or chromium alloying elements

Product Characteristics:

- ◆ Save project cost
- ◆ Improve refractories performance
- ◆ Improve refractories durability

Typical Applications:

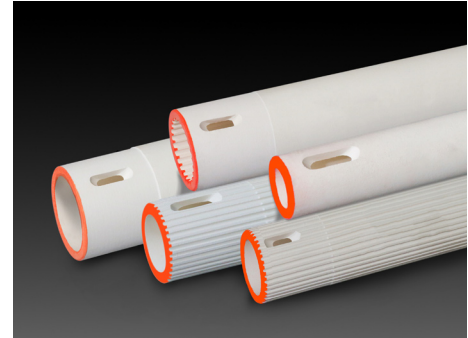
- ◆ Castable project
- ◆ Industrial furnaces
- ◆ Refractory products
- ◆ Precast



HIGH TEMPERATURE CERAMIC ROLLER

Introduction

LEX High temperature ceramic roller manufactured with the most advanced and newest formulations and processes, which has super thermal shock resistance, higher bending strength and heavy load in high temperature.



Product Characteristics:

- ◆ Low coefficient of thermal expansion
- ◆ Strong thermal shock resistance
- ◆ Good resistance to thermal shock
- ◆ High size precision
- ◆ Perfect and reliable shaft head connection technology

Typical Applications:

- ◆ Ceramic industry
- ◆ Metallurgical industry

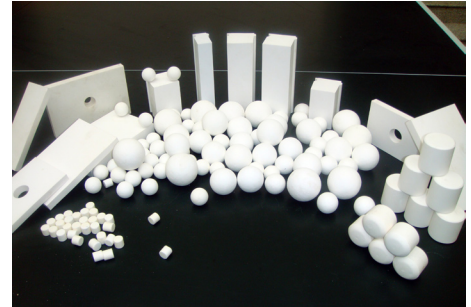
		LX-75	LX-85	LX-95	LX-99
Available Density	Kg/m ³	2.5-2.6	2.6	3.5	3.9
Max Service Temperature	°C	1400	1500	1600	1800
Color		White	White	White	White
Water Absorption	%	5-8	<0.2	<0.15	<0.1
Flexura Strength	Kgf/cm ²	≥	≥1300	≥1800	≥2000
Alkaline Substance	%	<	<2.5	<1.5	<0.1
Hardness	Moh	9	7	8.5	9
Chemical Composition					
Al ₂ O ₃	%	≥75	≥85	≥95	≥99
SiO ₂	%	<1.55	<12	<1	<0.2
ZrO ₂	%	>3.54	—	—	—
Fe ₂ O ₃	%	<0.4	<0.5	<0.3	<0.1
Size	mm	±0.5			

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

CERAMIC BALL

Introduction

LEX High alumina ceramic ball is made by high quality alumina powder, with special rolling method technique and high firing technique to insure good wear resistance and roundness. We supply ceramic balls with 75%, 92%, 95%, 99% alumina content.



Product Characteristics:

- ◆ Good wear resistance
- ◆ Good roundness
- ◆ Super low abrasion

Typical Applications:

- ◆ Suitable for all kinds of ceramic raw material and mineral being by grinding method
- ◆ Suitable for high quality ceramic glaze grinding
- ◆ Other high purity mineral material grinding

Available Density	Kg/m ³	≥3.60g/cm ³
Al ₂ O ₃	%	92.00±1 %
Color		White
Water Absorption	%	0.01
Wear loss self by 24hours (%)	%	≤0.015
Hardness	Moh	9

This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.





LEX-FIBER®

Lex Thermal Insulation Corporation

Add: Room 903, Block B, Jinhai Shangfu Center, No.21, Guangqu Road, Chaoyang District, Beijing, China

Tel: 0086 10 58200181

Cell phone: 0086 18600915680

Email: freedream2020@hotmail.com

Website: www.lexfiber.com