



HIGH TEMPERATURE SOLUTIONS

refractory
ceramic fibres

biosoluble fibres

firebricks
and mortars

technical textiles

ropes, sleeves
and tapes

high temperature
products

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HIGH TEMPERATURE
TAILORED ITEMS

ALDERO industrial supplies offers a complete range of **High Temperature Solutions** with the best materials for high temperatures. **Personalized solutions** and tailor-made items are developed thanks to the cooperation with highly **qualified professionals** and the newest equipment for production and transformation of insulating materials (gluing, punching, stitching, cutting, etc.).

Ceramic and biosoluble fiber products to guarantee thermal insulation up to maximum temperatures of 1600°C. Available as: bulk fibers, blankets, papers, felts, rigid slabs, rigid panels, anchoring mules and mechanical fastening modules.

Insulating firebricks to satisfy specific thermo-physical features, working in the range of maximum temperatures between 1260°C and 1760°C.

Insulating concretes and dense refractory concretes with air-setting or water-setting, easy to place by casting or gunning, with maximum temperatures of use between 870°C and 1800°C.

Fiberglass or silica **technical textiles**: non-combustible textiles and felts with high mechanical features. They are resistant to abrasion, corrosion and vibration. Chemically stable and usable up to temperatures of 1000°C.

Textiles products in form of **ropes, sleeves and tapes** are constituted by spun yarns of 6-9-11 micron, subjected to special texturing, volumizing and braiding treatments. They are used as thermal insulation for temperatures up to 1260°C, in the form of: joints, gaskets, seals, etc.

There are also available some several **high temperatures tailored items**: pillows and textiles, valve covers, textile joints compensators, anti-dross blankets and curtains, fire blankets, anti-heat items and gloves.

TYPE	TRADE NAME	MAX TEMP.	BRAND
Bulk ceramic fibres	Cerafiber®	1260°C	THERMAL CERAMICS
	Cerachem® Fiber	1425°C	
	Cerachrome® Fiber	1425°C	

Cerafiber: Spun refractory fibres, made with electrically melted alumina and silica.
 Cerachem Fiber: Spun refractory fibres, made using electrically melted alumina, silica and zirconia.
 Cerachrome Fiber: Spun refractory fibres, made of electrically melted alumina, silica and chromia.

All three fibres are resistant to chemical attack, except for hydrofluoric and phosphoric acids and strong alkalis.

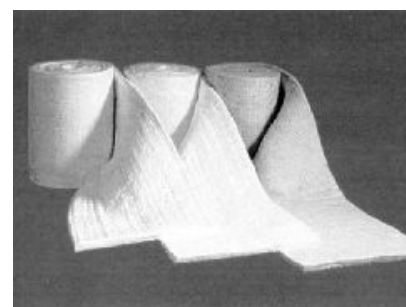


Refractory fiber blankets	Cerablanket®	1260°C	THERMAL CERAMICS
	Cerachem® Blanket	1425°C	
	Cerachrome® Blanket	1425°C	

All three grades of blanket have the same excellent chemical stability compared with their raw materials: Cerafiber, Cerachem Fiber and Cerachrome Fiber spun bulk.

They have excellent strength before and after heating. They have superior acoustic as well as thermal insulation characteristics.

The wide range of available densities and thicknesses allow for the most effective deployment of the superior thermal characteristics in a wide variety of applications.



High density blanket slabs	Pyro-Log® Standard	1260°C	THERMAL CERAMICS
	Pyro-Log® Zirconia	1425°C	

Pyro Log is the only 152 mm thick, high purity, needled blanket available in standard uncompressed densities up to 240 kg/m³.

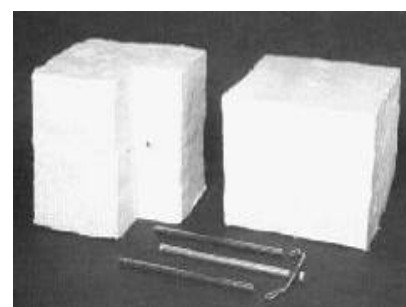
Vertically-fiberized Pyro-Log fibre is of exceptional uniformity of dimensions and of naturally low shot content.

Pyro-Log offers a unique solution to the problems encountered in designing linings to use in the toughest of furnace environments.



Mechanically-fixed modules	Pyro-Bloc® Standard	1260°C	THERMAL CERAMICS
	Pyro-Bloc® Zirconia	1425°C	

Pyro-Bloc modules comprise two sections of Pyro-Log slab in edge-grain orientation. These are held in position with two stainless steel tubes mounted transversely through the modules and remote from the hot face. They are anchored to the furnace casing with the patented Pyro-Bloc fixing in any one of four standard versions, Y, M, T and Eye-bolt.



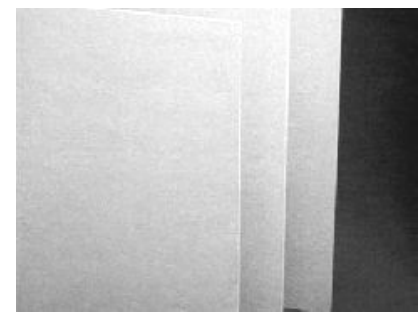
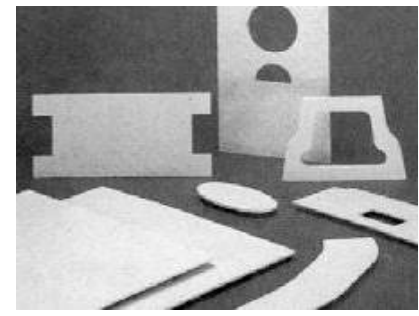
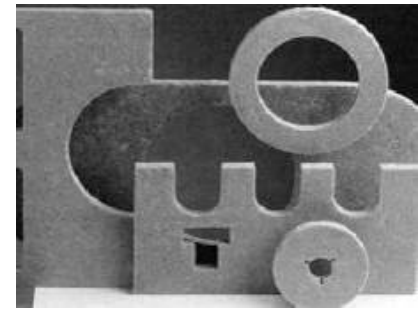
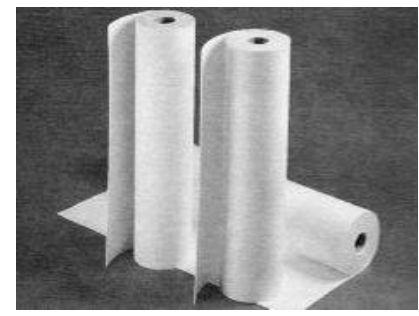
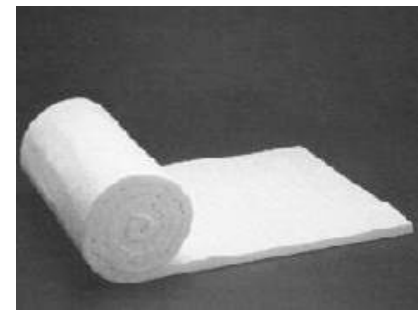
Convuluted anchor modules	Z-Blok Cerablanket®	1260°C	THERMAL CERAMICS
	Z-Blok Cerachem®/Cerachrome®	1425°C	
	Z-Blok Maftec® Blanket	1600°C	

Z-Blok 1 are convuluted blanket modules made from high quality spun-fibre blanket, folded and pre-compressed to a specified density.

The fixing system comprises two beams positioned within the folds and connected by tabs to an exterior channel, mounted transversely and centrally across the back of the modules. During installation, the modules are further compressed, the resilience of the fibre and recovery after the restraining bands are removed ensuring tightly-compressed intermodular joints



REFRACTORY CERAMIC FIBRES

	TYPE	TRADE NAME	MAX TEMP.	BRAND
	Rigid panel based on refractory fibres	Ceraboard® 100 Ceraboard® 115	1260°C 1400°C	THERMAL CERAMICS
Ceraboard is a refractory fibre board supplied in panels of standard thicknesses made using a slurry of refractory fibres and binders which have a low organic content. The combination of different refractory fibres, inorganic and organic binders in different proportions allows types of boards to be made suitable for different use temperatures. In some types of heating equipment the emission of fumes, which can occur when binders burn out of the board, can be easily eliminated.				
	Rigid sheets made from refractory fibre	Ceracarton® 100	1260°C	THERMAL CERAMICS
Ceracarton 100 is a thin board made of a mixture of Kaowool fibres, refractory fillers, inorganic and organic binders. It is a homogeneous, low density product with a good uniformity of thickness. Ceracarton 100 is an ideal material for the production of die cut pieces.				
	Refractory fibre felt	Cerafelt®	1320°C	THERMAL CERAMICS
Cerafelt is an insulating refractory felt, obtained by hot pressing. It is made of Cerachem fibres, bonded with an organic binder which begins to burn out at 180°C. This special binder makes Cerafelt particularly suitable for die-cutting operations. Semi rigid, it is neither brittle nor dusty. Cerafelt optimizes the manufacture of complex, die-cut shapes to close tolerances. With a choice from eight densities and seven thicknesses, Cerafelt offers a grade to suit most requirements. Made of chemically stable fibres, lightweight and very insulating, Cerafelt is a multi-purpose product.				
	Refractory ceramic and alumina fibre paper	Kaowool® 1260 Paper Kaowool® 1400 Paper Kaowool® 1600 Paper	1260°C 1400°C 1600°C	THERMAL CERAMICS
Kaowool Paper is manufactured from high purity refractory fibres and designed for high temperature insulation. Advanced production techniques ensure uniform fibre distribution and close control of thickness and density. It is available in 3 versions: > Kaowool 1260 Paper is produced from Alumina (47%) – (52%) Silicate fibres > Kaowool 1400 Paper is produced from Alumina (48-54%) – (46-52%) Silicate fibres > Kaowool 1600 Paper is produced from Alumina (88%) – (9%) Silicate fibres These three types of paper have excellent features: very low thermal conductivity, low thermal mass, exceptional resistance to thermal shock and excellent mechanical strength.				
	Refractory fibre blanket	Maftec® Blanket	1600°C	THERMAL CERAMICS
Maftec Blanket is made from pure mullite fibre only, needled on both sides, and contains no binder or other added constituent. It can be used at continuous operating temperatures up to 1600°C, under oxidizing, neutral or slightly gas-rich conditions, retaining its original toughness, strength and soft, fibrous structure after extended use at this temperature. Maftec Blanket is more resistant to acid and alkaline solutions than conventional aluminosilicate fibre blankets. Being virtually free of shot, it has exceptionally good thermal insulation characteristics.				

TYPE	TRADE NAME	MAX TEMP.	BRAND
Bulk biosoluble fibres	Superwool® Plus™ Bulk Superwool® HT™ Bulk	1200°C 1300°C	THERMAL CERAMICS

Superwool Bulk consists of a loose mass of randomly orientated low bio persistent fibres. Superwool Bulk has excellent thermal stability and retains its original soft fibrous structure up to its maximum continuous use temperature.

Superwool Bulk contains no binder and does not emit fume or smell during the first firing.



Biosoluble fiber blankets	Superwool® Plus™ Blanket Superwool® HT™ Blanket	1200°C 1300°C	THERMAL CERAMICS
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Superwool Blanket is made of Superwool long fibres. It exhibits outstanding insulating properties at elevated temperatures. Superwool Blanket has an excellent thermal stability and retains its original soft fibrous structure up to maximum continuous use temperature.

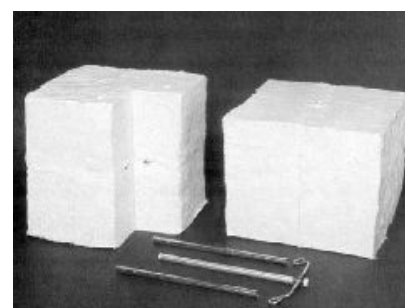
Blanket contains neither binder nor lubricant and does not emit any fume or smell during the first firing. It is flexible, easy to cut and shape and easy to install.



Biosoluble monolithic modules mechanically-fixed	Superwool® Plus™ Pyro-Bloc Superwool® HT™ Pyro-Bloc	1200°C 1300°C	THERMAL CERAMICS
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Superwool Pyro-Bloc modules comprise two sections of Superwool Plus Pyro-Log slab edge-grain orientation.

These are held in position with two stainless steel tubes mounted transversely through the modules and remote from the hot face. They are anchored to the furnace casing with the patented Pyro-Bloc fixing in any one of four standard versions, Y, M, T and Eye-bolt.

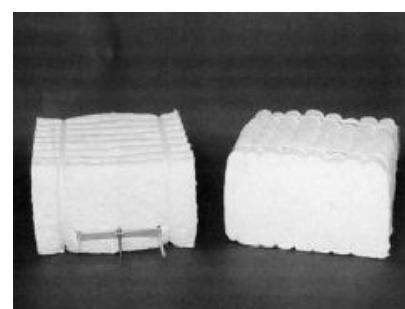


Biosoluble anchored modules	Superwool® Plus™ Z-Blok Superwool® HT™ Z-Blok	1200°C 1300°C	THERMAL CERAMICS
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Superwool Z-Blok are convoluted blanket modules which combine the excellent thermal characteristics and proven service performance of Z-Bloks with the ease of installation and versatility of the T-Bar anchoring system.

They are made from spun-fibre blanket, folded and precompressed to a specified density, and held in position with 2 stainless steel tubes, mounted transversely within the module. The modules are supplied encapsulated in plastic film, which ensures dust levels are kept to a minimum during installation.

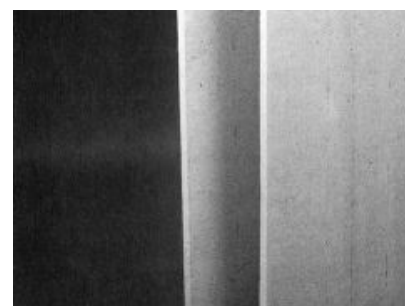
During installation, modules are further compressed, the resilience of the fibre and recovery after the restraining bands are removed ensuring tightly compressed inter-modular joints.



Biosoluble rigid panels	Superwool® Plus™ Board Superwool® HT™ Board	1100°C 1300°C	THERMAL CERAMICS
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Superwool Boards are rigid panels made from a mixture of Superwool fibres, refractory fillers, organic and inorganic binders.

Superwool Boards have: thin boards is easily die-cut and all boards can be cut with a hacksaw blade allowing precise shapes to be made; good thermal shock resistance allows use in applications where large variations in temperature occur; low heat storage capacity; can be used in direct contact with flame; and very low thermal conductivity





TYPE	TRADE NAME	MAX TEMP.	BRAND
Biosoluble fiber paper	Superwool [®] Plus [™] Paper Superwool [®] HT [™] Paper	1200°C 1300°C	THERMAL CERAMICS

Superwool Paper an insulating product, is made of Superwool fibres bonded with a low percentage of organic binder. It has excellent thermal insulation characteristics and exceptional handling properties.

Very flexible and resistant to tearing, Superwool Paper is particularly suited to all applications requiring further processing (laminated composites, die-cutting, rolling, folding). The organic binder burns out cleanly on the first firing at approximately 300°C, with ignition starting at 180°C.

TYPE	TRADE NAME	MAX TEMP.	BRAND
Insulating firebricks	Insulating Firebricks JM™	from 1260°C to 1760°C	THERMAL CERAMICS

Six grades of insulating firebricks with limiting temperatures of use ranging from 1260°C to 1790°C. Each grade is formulated to meet specific thermal and physical requirements. JM Firebricks are made from high-purity refractory clays, with graduated additions of alumina for the higher temperature products, and a carefully graded organic filler, which burns out during manufacture to give a uniform, controlled pore structure. Each brick is machined to precise tolerances on all six faces.



Refractory air-setting mortars	Blakite	1650°C	THERMAL CERAMICS
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Refractory air-setting mortars are normally supplied as ready-to-use wet blends of finely-ground aggregates and special binders. They develop good strength on air drying, forming strong joints and conferring an almost monolithic structure to the brickwork.



Refractory air-setting cement	Kaowool™ White Cement	1400°C	THERMAL CERAMICS
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Kaowool White Cement is a high temperature, air setting cement for use mainly as a refractory surface coating, although generally used on Kaowool Ceramic Fibre Substrates it can also be used on porous materials such as Insulating Fire Brick and Insulating Concretes and will equally enhance their abrasive resistance. The cement sets to form a strong hard film, which develops a ceramics bond at high temperatures yet maintains excellent resistance to thermal shock. The maximum recommended surface temperature is 1400°C. It can also be used as an adhesive for ceramic fibre products.



Insulating concretes	Firelite® (very light, light, medium) Firelite® Low Iron	from 870°C to 1760°C	THERMAL CERAMICS
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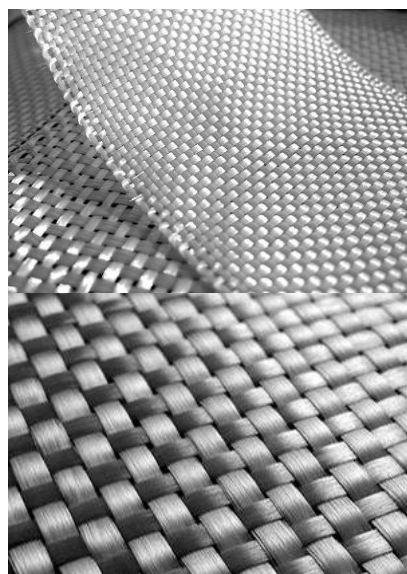
These grades are used for the containment of heat within high temperature operating structure. They can be used for either hot face working linings or as backing linings behind higher density working linings. These grades are easily placed by casting or gunning and offer good performance in most general applications.



Dense & refractory concretes	Firecrete®	from 1260°C to 1800°C	THERMAL CERAMICS
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Dense and Conventional grades are bonded by high alumina cements. These grades are easily placed by casting or gunning and offer good performance in most general applications.

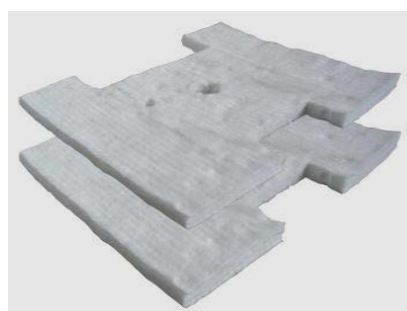




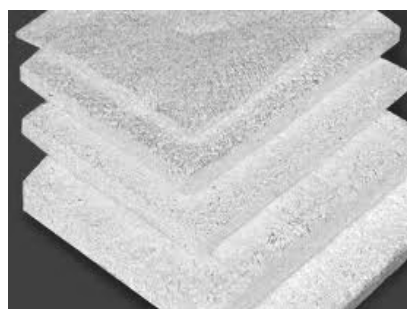
TYPE	TRADE NAME	MAX TEMP.	BRAND
Textiles glass fibres	GLASS-TEX VR	550°C	MaxT
The GLASS-TEX VR/VT/VTR textiles are formed of 100% continuous twist glass fibres for temperatures up to 540°C. They undergo special finishing treatments to respond to the various needs for high temperature heat insulation. Totally incombustible, with elevated mechanical performance, they can withstand temperatures up to 650°C. They are also chemically stable and do not corrode. The main application fields are power stations and the chemical and steel industries. The GLASS-TEX VR/VT/VTR textiles are used as: > Protective covers against heat and sparks, and to contain heat during the preheating and heat treatment operations generally. > Padding for mobile insulation cladding on valves, flanges, turbines and boilers. > Expansion joints and special tapes for applications on complex shapes. > Pipe sleeves. For special applications, the textiles can be treated and backed or coated with: silicone, self-extinguishing acrylic resin, aluminium, HT polyester, vermiculite, polyurethane, neoprene, PTFE, special antacid treatments, stainless steel reinforcements.			



Textiles silica fibres	SIL-TEX	1000°C	MaxT
SILITEX cloths consist 100% of continuous twisted yarns of amorphous silica for continuous temperatures up to 1000°C. The SIL-TEX cloths offer excellent thermal, electric and electronic insulation and they withstand sudden exposures to heat as well as rapid cooling. They remain flexible at high temperatures and are not affected by the majority of chemical agents. The main characteristics of the SIL-TEX cloths not only allow them to be used in extremely critical conditions, but they also enable new energy saving methods to be adopted, to reduce the cost of maintenance and to minimise plant standstills. The SIL-TEX cloths are used in the form of: > Covers to protect against metal splash and sparks. > Furnace curtains. > Cushions for mobile lagging > Special tapes for complex applications > Sleeves for piping			



Felt glass fibre	INSULMAT E-GLASS	550°C	MaxT
INSULMAT E-GLASS is a felt made of glass fibre, that is mechanically needled and completely free of any chemical binder. A high density, excellent insulating properties and good sound absorption are made by the needling and the diameter of the fibres. INSULMAT E-GLASS is non-inflammable, it is alkaline and chemically stable. Thanks to its flexibility and stability to vibration is used in the form of blankets to insulate turbines, valves, expansion joints, combustion chambers, ovens, engines, exhausts and ships.			



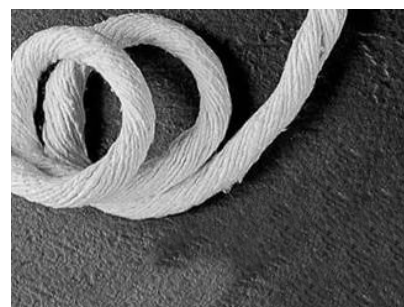
Felt silica fibre	INSULMAT E-SIL	1000°C	MaxT
INSULMAT E-SIL is a felt made of amorphous silica fibre, that is mechanically needled and completely free of any chemical binder. The high content of silica makes the product more compact, flexible and resistant to the maximum operating temperature. INSULMAT E-SIL is non-inflammable, it is chemically stable and offers a good level of acoustic insulation. Thanks to its heat insulation characteristics, it is used in the form of cushions to insulate turbines, combustion chambers and exhausts.			

TYPE	TRADE NAME	MAX TEMP.	BRAND
Twisted ropes	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are really flexible and soft ropes obtained by twisting lots of yarns together.

Applications: Thermal insulation of pipes, flexible tubes and electrical cables protection - Sealing joints.

Range: Diameters from 3 mm to 50 mm.

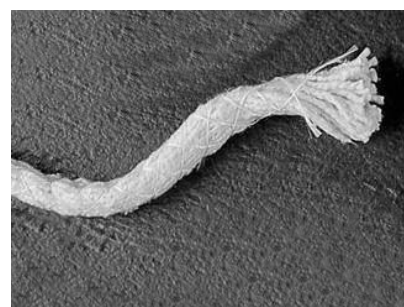


Knitted ropes	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

These ropes are manufactured by a knitted braiding method in order to obtain an extremely elastic and flexible sealing packing that does not shed on cutting. High density and no elasticity could be obtained by putting inside them a core of the same yarns.

Applications: Sealing joints for stoves and ovens doors – Insulation.

Range: Diameters from 3 mm to 50 mm.



Tricò ropes	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are made of tubular braiding to get more flexibility and elasticity, and to prevent cut fraying. They can be produced with different kind of density, and also with central cores of fibres.

Applications: Sealing joints for stoves and ovens door – Insulation.

Range: Diameters from 3 mm to 25 mm.

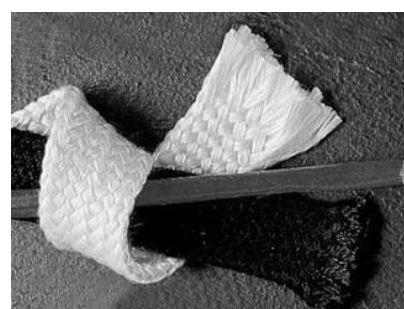


Braided sleeves	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are manufactured by a tubular braiding in order to obtain an extremely elastic and flexible sleeve.

Applications: Thermal insulating and heat protection of flexible pipes, tubes and electrical cables - For dielectric insulating they can be impregnated either with silicon rubber or other special treatments.

Range: Maximum internal diameters 100 mm.

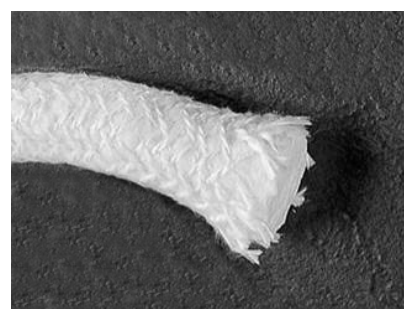


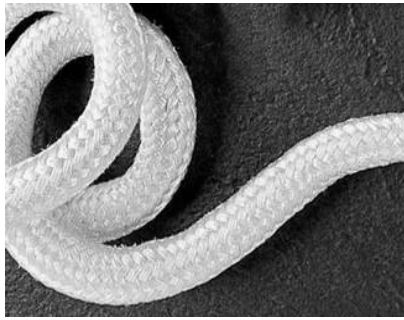
Insulating ropes	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are made of: a central cores of fibres or ceramic, glass or silica strips. They are produced with external knitted braiding open or thick mesh. For this reason they are softer, lighter and cheaper. It is possible to make two or more braiding to improve mechanical resistance.

Applications: Thermal insulation - Insulation of pipes and plants – Seals for furnace doors – Gaskets for oven.

Range: round section open mesh and round, square and rectangular section thick mesh. From 12 mm to 100 mm.





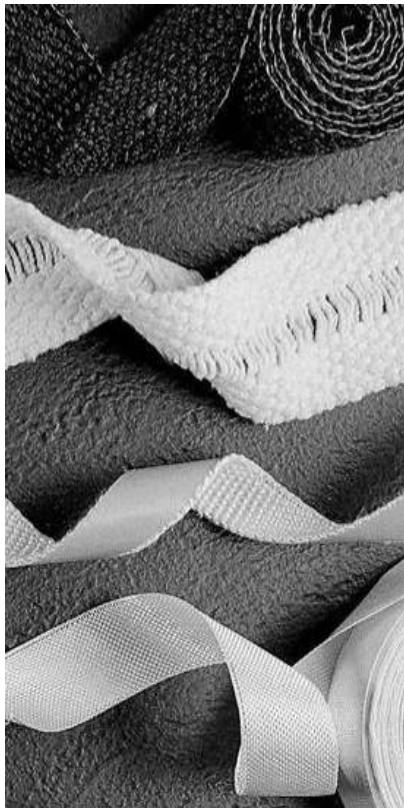
TYPE	TRADE NAME	MAX TEMP.	BRAND
Braided packing	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are produced by braiding the yarns on a compact core of twisted or braided yarns. These packings are therefore compact, solid, flexible, with high mechanical resistance and sealing joints properties.

In order to increase the mechanical resistance, the hardness and the density of the ropes, two or more outside braidings can be done.

Applications: Sealing joints of ovens and boilers doors, stove, fireplaces, fireplaces, furnace oven trolleys, industrial containers, expansion joints.

Range: Round, square, rectangular sizes from 3 mm to 10 mm.



Selvedge tapes	GLASS-TEX E	550°C	MaxT
	BIOWOOL HT	1100°C	
	CERA-TEX	1260°C	

They are weaved from different yarns such as glass 550°C, HT glass 750°C, ceramic, carded HT glass. All tapes can be produced with a central slit (by lessening the yarns in warp) to fit flanges with loop pins, they can be made self-adhesive, with side bulb or treated with vermiculite for an outstanding resistance to temperature and flame, with graphite as lubricant, with PTFE for application with chemical agents, with silicone for protection from dust and welding sprays, oils, water, solvents.

> **Ladder Tapes.** They don't irritate and resist a continuous heat over 1000°C. Available in a wide range of sizes and thicknesses. Its main characteristic is the absence of some warp yarns to facilitate a perfect fitting and tightening of screws, bolts and through pins.

> **Double-Sided Adhesive Tapes.** They are textiles products manufactured with special yarns that are particularly suitable for high temperatures. To facilitate the use of the tape, a double-sided adhesive has been added to make the positioning of the tape easier.

> **Dielectric Adhesive Tapes.** They are made in thin thicknesses, up to 0,5 mm. The dielectrics tapes are used as dielectric insulating.

> **Tubular Sleeveings.** They are braided in order to ensure elasticity and to be applicated easily on pipes. They can be treated outside with rubber, silicone, aluminium.

Applications: Protections against heat – covering cables – insulation of tubes and exhaust pipes – electrical insulation – furnace joints – seal joint for stoves and ovens – lagging for pipes – flexible pipes – boilers – industrial furnaces – furnace doors – drawing mills – stoves – chimneys – metalwork in general – conveyor belts.

Range: Standard width from 10 mm to a 320 mm, thickness from 1 mm to 10 mm. All sizes can be produced on request.

TYPE	BRAND	
CUSTOM-TAILORED SPECIAL TEXTILES ITEMS	MaxT	
Custom-tailored special textiles items for high temperature insulation are produced according to customer drawing to be easy to fit and remove. They guarantee fire resistance and adapt easily to any shape. Furthermore they are resistant to vibrations and abrasion, water and oil repellent and offer chemical stability, aggressive agents resistance and safety in the use. Applications: gas turbines and exhaust diffusers, valve covers, smoke discharge pipes, steam turbines, steam lines, diesel engines.		
VALVE COVERS	MaxT	
Valve covers are removable heat covers made by special textiles for valves insulation. Produced using glass fibre coated with silicone, they are impermeable to water and oils and resist up to 250°C working temperatures. A special internal high density felt provides them with excellent heat and sound insulation. The closing system is made by hooks and stainless steel sealing springs. On request, the same products can be manufactured with fibres resistant to higher temperatures (1100°C).		
TEXTILE JOINTS COMPENSATORS	MaxT	
Textile dilation joints are flexible connections made to absorb vibrations and abridge movements between the two sections of connected pipes; they are used in presence of gaseous fluids, typically air and smoke, with temperatures of up to 1200°C. Different layers of specific tissues, insulation and reinforced materials are used; they are provided in tape or shaped on request. Applications: extremely high temperature smoke pipes, naval applications, applications in the energy sector for air or smoke ducts, thermal power plants, installations with "vibration damping" purpose.		
ANTI-DROSS BLANKETS AND CURTAINS	MaxT	
They are used to protect people and industrial & hydraulic plants from heat, fire, melted metal splash and welding residues. Pieces of metal and weld beads are removed very easily by shaking. They can be realized with many kinds of fibres, in any dimension, with support rings, etc.		
ANTI-HEAT ITEMS AND GLOVES	MaxT	
Personal safety equipment to protect complete or part of the body against thermal hazards such as contact with heat and flame, splashes of melted metals and other risks incurred during welding operations. They are made with various materials such as aramid, glass, aluminized fibre, etc. Resistant to high temperatures but comfortable to wear at the same time.		
FIRE BLANKETS	MaxT	
The fire blankets are made of fire retardant glass fibre and, together with portable fire extinguishers and hydrants, they are the most immediate firefighters equipment for small free flames. If a fire breaks out the blanket is used to suffocate and extinguish it quickly. The blankets are all packed in soft or hard bag. Applications: Fire protection to extinguish small fires in domestic or commercial places or as part of the safety equipment on cars, boat, etc.		

NOTE: **Technical data sheets** of the items on this catalogue can be downloaded from website **www.aldero.com**



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