

## SPECIFICATIONS

Our line of ceramic textiles includes ceramic fiber ropes, braids, cloth, tapes, and sleeving produced from alumina-silica ceramic fiber, free of asbestos. These ceramic fiber textile materials can be used in different industrial applications under temperatures up to 2300°F (1260°C) and have excellent chemical stability and strong resistance to thermal shock and corrosion attack.

Exceptions are hydrofluoric and phosphoric acids and concentrated alkalies. Ceramic fiber textiles also resist oxidation and reduction. If wet by water or steam, thermal properties are completely restored upon drying. No water of hydration is present.

This family of textiles contain 15% organic carriers, which helps to establish physical formation of products. The carriers burn out at about 750 °F (400 °C). Ceramic fiber textiles also contain reinforcement insert materials of either inconel wire or continuous fiberglass filament to increase handling strength during installation and enhance fiber durability to rated temperatures of 2000°F (1093 °C) for inconel wire and 1200 °F (649°C) for fiberglass filament.

In choosing the most appropriate product for a particular application, the following should be considered:

**Multi-Ply Twisted Ceramic Fiber Rope (Made from Wicking)**

These ropes are produced by twisting multiple plies of ceramic fiber wicking together. Standard 3-ply twisted rope is relatively soft and low in density and is the most economical choice. HD 9-ply twisted rope provides increased compression resistance and strength and is much higher in density (about 50% denser) than 3-ply twisted rope. Both ropes are also available with covering of inconel wire mesh, which drastically increase resistance to mechanical abuse.

**3-Ply Twisted Ceramic Fiber Rope (Made from Yarns)**

This kind of ceramic fiber rope is made by forming many strands of yarn into three separate plies, which are then twisted into a three-ply rope. This ceramic fiber rope is slightly denser and more durable than the 3-ply twisted ceramic fiber rope made from wicking.

**Round and Square Ceramic Fiber Braids**

The highest density of all of our ceramic fiber ropes, the round and square braids are produced by overbraiding around a core of ceramic fiber to achieve maximum resistance to mechanical abuse. In addition to its superior strength, round and square braids also exhibit minimal unraveling when cut.

**Woven Ceramic Fiber Cloth, Ceramic Fiber Tape, and Ceramic Fiber sleeving**

Ceramic fiber cloth, ceramic fiber tape, and ceramic fiber sleeving are very flexible fabrics. Insert materials of inconel wire and fiberglass filament are incorporated into the yarn to increase tensile strength of the fabrics both before and after exposure to heat. Typical applications for cloth, tapes, and sleeving include gaskets, seals, furnace and welding curtains or pipe wrapping.



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### Ceramic Fiber Textiles Chemical Composition

Chemical Contents	Cloth	Tape	Square & Round Braided Ropes	Twisted Rope
Alumina - Al <sub>2</sub> O	47	47	47	47
Silica - SiO <sub>2</sub>	53	53	53	53
Boron Oxide - B <sub>2</sub> O <sub>3</sub>	-	-	Trace	Trace
Calcium Oxide - CaO	-	-	Trace	Trace
Magnesium Oxide - MgO	-	-	Trace	Trace

### Ceramic Fiber Textiles Product Properties

	Cloth	Tape	Square & Round Braided Ropes	Twisted Rope
Color	White	White	White	White
Width (inch)	36	1/2, 1, 2, 3, 4, 6	-	-
Normal Thickness (inch)			1/4, 3/8, 1/2, 5/8, 3/4, 1, 1.25, 1.5, 2	1/4, 3/8, 1/2, 5/8, 3/4, 1, 1.25, 1.5, 2
Normal Thickness (inch)	1/8	1/8	-	-
Magnesium Oxide - MgO	-	-	Trace	Trace
Density (PCF)	-	-	-	-
Tensile Strength grip lb/f	63	58	110-150	75-100
Melting Point °F	3200	3200	3200	3200
Continuous use up to °F	2300	2300	2300	2300
Temperature Limit of Insert Material	2000 (wire) 1200 (Glass)	2000 (wire) 1200 (Glass)	-	-

Data are average results of test conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

The information, recommendations and opinions set forth herein are offered solely for your consideration, inquiry and verification, and are not, in part or total, to be construed as constituting a warrant or representation for which we assume legal responsibility.

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For more information on GLT Products, please call toll-free at 800.874.1748 or online at [www.gltproducts.com](http://www.gltproducts.com).



Innovative Insulation Systems

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