

TaoFibre® Ceramic Fiber Textiles

[TaoFibre textile](#) family includes ropes, braids, cloth, tapes, and sleeving. Our textiles are made from alumina-silica ceramic fiber, free of asbestos. These fiber 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 acids and concentrated alkalis. TaoFibre textiles also resist oxidation and reduction.

TaoFibre textiles contain 15% organic carriers, which helps to establish physical formation of products. The carriers burn out at about 750°F. 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.



Multi-Ply Twisted Ropes (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 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 Ropes (Made from Yarns)

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

Round and Square Braids

The highest density of all TaoFibre ropes, the round and square braids are produced by over braiding 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 Cloth, Tape, and Sleeving

TaoFibre cloth, tape, and sleeving are very durable and 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.

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Main Properties

Description	Cloth	Tape	Square & Round Braided Ropes	Twisted Rope
Color	White			
Width (in)	36	1/2, 1, 2, 3, 4, 6		
Normal Section or Diameter (in)			1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1.25, 1.5, 2	1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1.25, 1.5, 2
Normal Thickness (in)	1/8			
Density (pcf)			33-36	20-33
Tensile Strength (pcf)	63	58	110-150	75-100
Melting Point (°F)	3200			
Continuous Use (°F)	2300			
Temperature Limit of Insert Material (°F)	2300 (Wire)			
	1200 (Glass)			
Chemical Analysis (%)				
Al ₂ O ₃	47			
SiO ₂	53			
B ₂ O ₃			Trace	Trace
CaO			Trace	Trace
MgO			Trace	Trace
Note: Test data shown are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specific purposes.				

Typical Applications:

- Gasket and packing
- Pipe hanger insulation
- Furnace door insulation and seal
- Tadpole gasket bulb cord
- Expansion joint packing in boilers and furnaces
- Cable and wire insulation
- Infrared radiating diffusers
- Welding curtains and covers
- Woodburning stove door seal
- Glass furnace seal
- Casting starter block plug

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