



INDUCTION HEATING EQUIPMENT CATALOG

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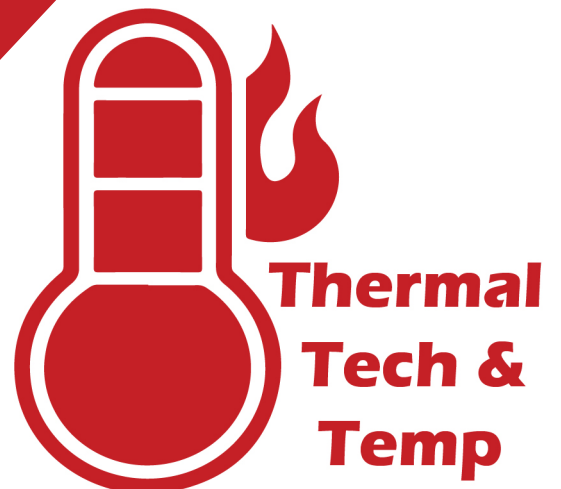
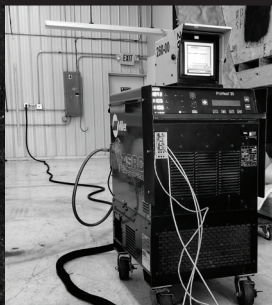
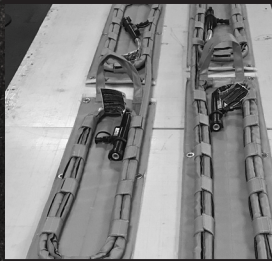


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ABOUT US

THE TTT STORY

Thermal Tech & Temp Inc. has contributed to the heating industry for over 20 years. We specialize in custom making induction heating equipment, insulation materials & electrical resistance heating equipment. Some of our custom fabricated induction heating accessories include induction heat clamps, induction heat clam shells, and internal plugs. We take pride in the work we do by taking the time to meet our customers at job sites and by carefully overseeing all operations to make sure we are always fitting our customer's needs.

Thermal Tech & Temp Inc. is committed to achieving total customer satisfaction by delivering high quality, durable, and custom fabricated products 100% of the time!

You can find Thermal Tech & Temp Inc. on many different social media platforms. Follow our accounts on Facebook, Twitter, Instagram, LinkedIn & Youtube to stay up to date with our latest products and news.

CONTACT US

We love connecting with our customers! Feel free to visit us during normal business hours, or reach out via phone or email, and make sure to stay up-to-date with Thermal Tech & Temp by following us on social media!

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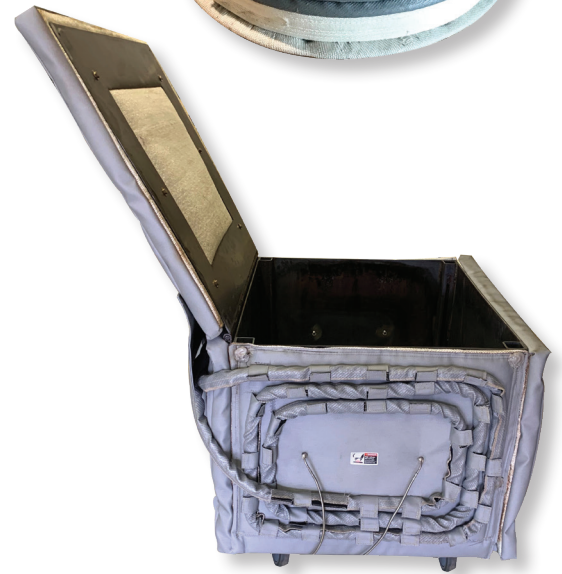
INDUCTION OVENS

OVENS/FURNACES

Our unique manufacturing method of induction ovens and furnaces allows for a uniform preheat and stress relief of materials that you don't see in other induction ovens. This is especially beneficial for some metals, such as aluminum or stainless steel parts, that cannot be heat treated through direct induction.

KEY FEATURES:

- Quick heated up times
- Easily moved
- Convenient preheat
- Convenient stress relief
- Durable steel liner
- Controlled cool down times
- No fumes or venting
- No open flames
- Cost effective
- Increased staff safety
- Custom made for your application
- Powered by Miller ProHeat 35



INDUCTION BLANKETS

INDUCTION BLANKETS

Thermal Tech & Temp's induction heating blankets are manufactured from durable high temperature materials. Our flexible induction post weld heat treatment (PWHT) blankets are designed to withstand the tough conditions in both industrial and construction applications. With our induction blankets, we create a safer welding environment for our customers. All of our induction blankets are also designed to have a high tensile strength and come with high temp magnets. Along with easy set-up and flexibility, and the ability to temperature control, our blankets can be custom made to fit a wide variety of pipe diameters and plate lengths.

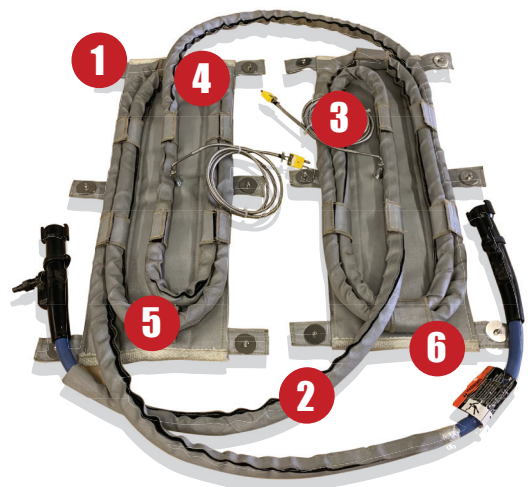


KEY FEATURES:

- Custom made to fit your application
- Able to be reconfigured without a peg board
- Made with durable/high temp. materials
- Improved welding environment
- No exposure to open flame
- No need for explosive glasses
- Easy set up
- Fits various pipe diameters lengths
- High strength
- Made with high temp magnets



- 1 MAGNET
- 2 INDUCTION COIL
- 3 THERMAL COUPLE
- 4 BAYONET
- 5 VELCRO TABS
- 6 32 OUNCE SILICONE COATED FABRIC



INDUCTION HEAT CLAMPS

CLAMPS

Ideally, induction heat clamps are suited for large diameter rotation when using submerged arc or manual metal arc but is also suited to small diameters. Our induction heat clamps are fitted with four thermocouples that are designed to contour of the pipe to control pre-heat temperature. As the pipe rotates around to the starting point, the thermocouples begin to pick up temperature readings to adjust the output of the 35 kilowatts to suit the target temperature that has been set. The spring that is positioned on the back of the heating clamp mounting is designed to allow the clamp to move in the vertical position which allows for any ovality in the pipe.



KEY FEATURES:

- Faster set up time
- Faster temp readings
- Fully controllable
- Uniform heating
- Can be digitally recorded
- Fast return on investment
- No hydrogen created
- Low running costs

INDUCTION HEAT CLAM SHELLS

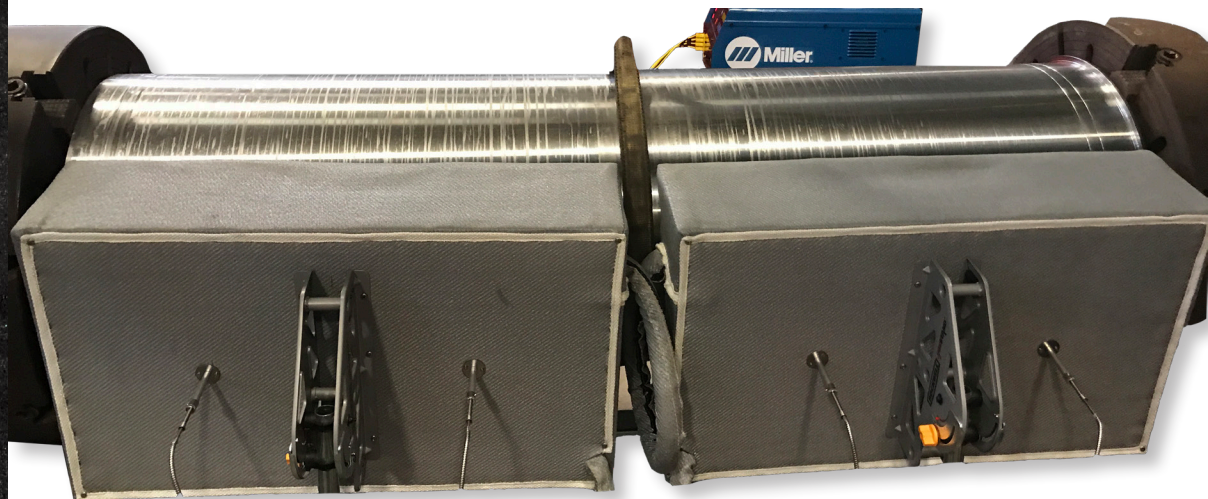
CLAM SHELLS

Our induction heat clam shells are custom made to fit any application. We also utilize a new style of induction coil (the electric heater) set up for the Miller ProHeat 35 Induction Heating System that focuses on pre-heating metal as it rotates. In addition, our induction heat clam shells offer a pre-heat treatment of up to 1200°F. Internal thermocouples can also be added to monitor to produce the units of temperature during the pipes rotation. We also offer daisy chained induction heat clam shells which provide a 30 inch diameter roll that preheat at 500°F for a sub arc welding application.



KEY FEATURES:

- Uses ProHeat 35
- Preheats up to 1200°F
- Custom made



INDUCTION COILS

INTERNAL PLUGS

Our plugs allow for an even pre-heat and are powered by Miller ProHeat 35. Our induction internal plugs can be inserted into bearings, vessels, and large piping for induction heating. The temperature rating of these internal plugs can be up to 1100°F.



KEY FEATURES:

- Custom made
- Allows even preheat
- Powered by ProHeat 35

INDUCTION COILS

LIQUID COOLED INDUCTION COILS

Liquid cooled coils provide a highly versatile tool for preheating, stress relieving, hydrogen bake out, and post weld heat treat in a variety of pipe diameters. Liquid cooled coils are great for preheat application on geometric that prevent use of air-cooled blankets. With liquid cooled coils, uniform heating is maintained along and through the heat zone by using induction to heat within the material.



TWO WAYS TO COOL



AIR COOLED INDUCTION COILS

Air-cooled coils may be the right choice when the maximum preheat temperature is 400°F. Air-cooled coils provide the same flexibility as liquid-cooled coils for preheating, and can be utilized in applications where the part is an irregular, non-standard shape that needs flexibility of wrapping the part.

PROTECTIVE SLEEVES

PROTECTIVE SLEEVES

Thermal Tech & Temps protective sleeves provide flexibility, durability, and thermal containment, and are able to be either heat treated or coated with vermiculite or PTFE. Resistant to hydraulic fluids, lubricating oils, and fuels, our protective sleeves insulate against energy loss in piping and hosing. In addition, our protective sleeves help to protect employees from burns while providing a flame resistant “bundling” of wires, hoses, and cables. Both Aerospace and Industrial sleeves are coated with the same proprietary silicone rubber compound for increased durability and enhanced heat & flame protection.

KEY FEATURES:

- Braided with high-quality fiberglass yarn
- Will not burn
- Flexible, durable with thermal containment
- Can be heat treated or coated
- Hydraulic fluid, lubricating oil & fuel resistant
- Insulates against energy loss
- Protects the safety of employees



TEMPERATURE RECORDING

TEMPERATURE RECORDING

WHAT WE OFFER:

SPRING LOADED THERMOCOUPLES

Fixed to the induction blanket to provide precise temperatures while heating

24 POINT TYPE K THERMOCOUPLE RECORDER

Offer reliable, accurate measurements with a wide temperature range

MALE & FEMALE THERMOCOUPLE PLUGS

Offer quick and easy clamp assembly

PREMADE THERMOCOUPLE TYPE K

Can be made in custom lengths & can withstand temperatures of up to 2000°F

THERMOCOUPLE EXTENSION LEAD

Plugs right into the ProHeat 35

12 POINT RECORDER

Connects right to the ProHeat 35

MILLER PROHEAT 35



1 MALE & FEMALE TC PLUGS



2 SPRING LOADED THERMOCOUPLES

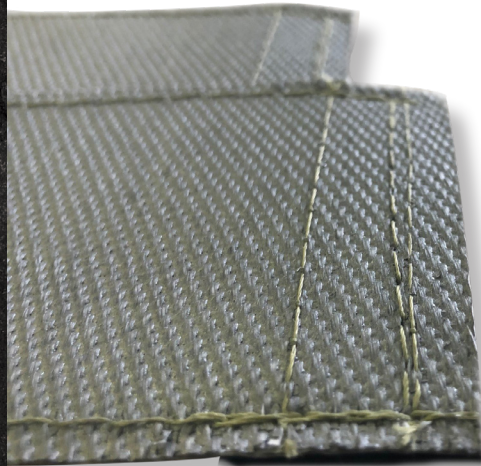
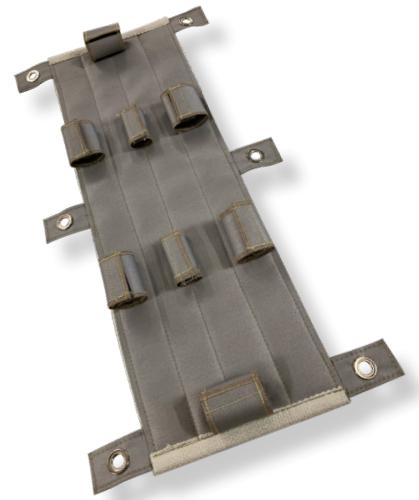
3 THERMOCOUPLE EXTENSION LEAD



TABS, GROMMETS & MAGNETS

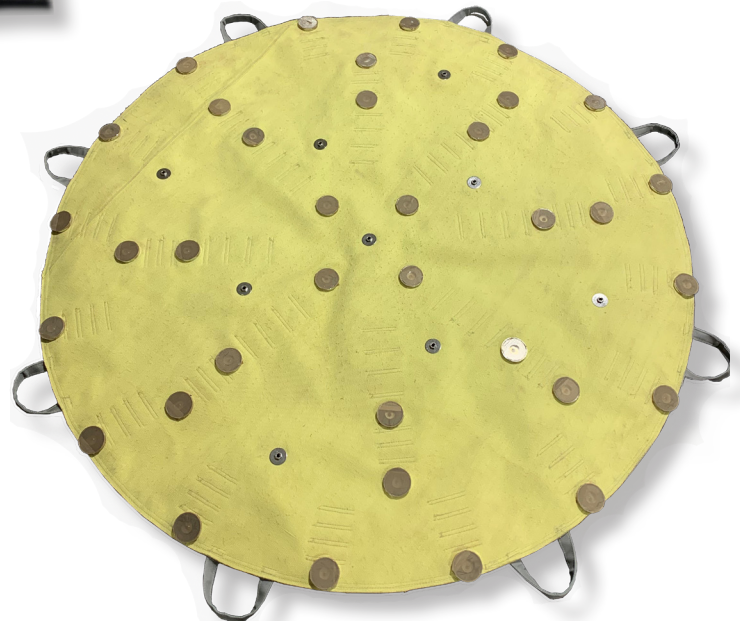
TABS, GROMMETS & MAGNETS

Coil tabs act as a harness to contain the induction coil on the blanket per the design of the heating arrangement. We utilize different size tabs for various blankets. Grommets are then added to the blanket to hold magnets, stud pins or any other kind of hardware that can be added to the induction blanket. Thermal Tech & Temp's custom fabricated tabs come in 2 inch by 7 inch, 3 inch by 6 inch, and 4 inch by 6 inch. Finally, our high temperature magnets have different pull strengths based on the weight of the blanket. These magnets are installed in through the grommet and will simplify attaching the blanket to the work piece.



KEY FEATURES:

- Easy installment
- Simple attachment
- High temp resistant
- Uniform heating
- Repetitive heating



WELDING & KNEELING PADS

WELDING & KNEELING PADS

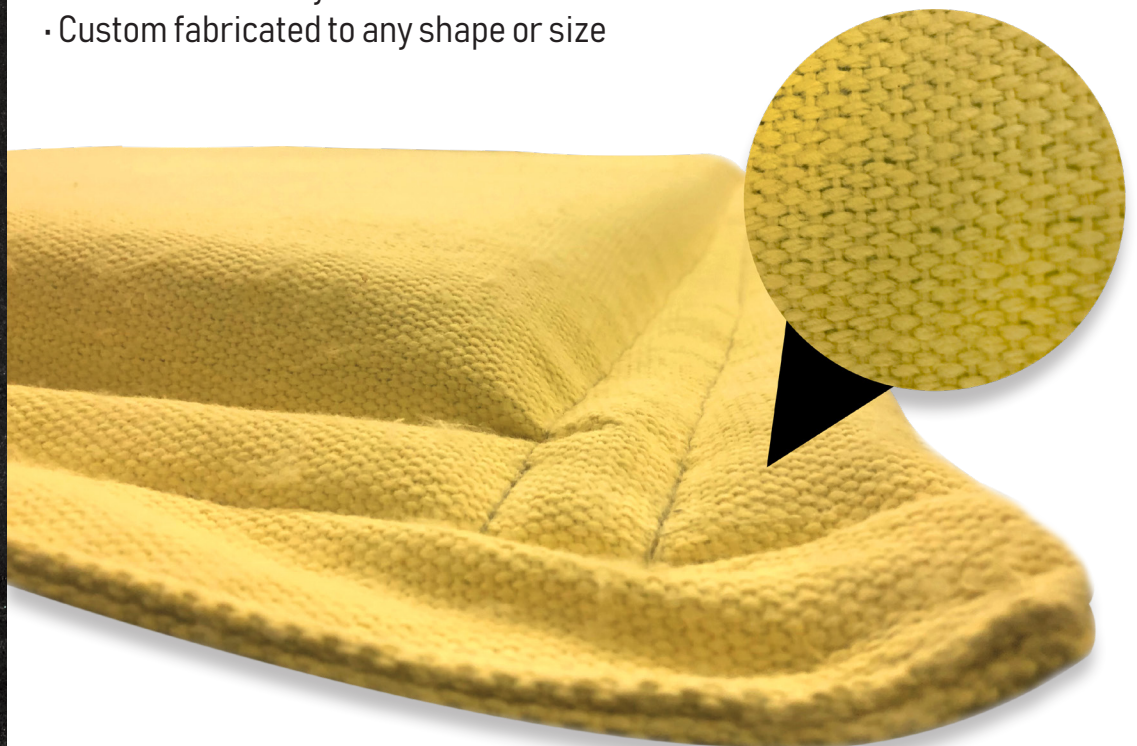
When it comes to ergonomics in the welding industry, kneeling pads can be essential to industrial workers that put constant strain on their knees. Thermal Tech & Temp's high temperature welding kneeling pads provide great protection from heat and more importantly sparks and slag from welding.

Our pads can be placed in tight, hard to reach spaces to offer maximum comfort while working. Manufactured from high temperature resistant Kevlar and Thermal Tech & Temp Insulation up to 1200 degrees Fahrenheit. Our pads are offered in a variety of thicknesses and can be custom fabricated to any shape or size for your needed application.



KEY FEATURES:

- Protects from heat, sparks & welding slag
- Can be placed in tight/hard to reach spaces
- High temperature resistant
- Protects up to 1200°F
- Offered in a variety of thicknesses
- Custom fabricated to any shape or size



WELDING CURTAINS

WELDING CURTAINS

Thermal Tech & Temp welding blankets and curtains aims to protect other applications and areas so weld splatter doesn't arc off and melt or heat up something else. Our welding blankets and curtains are also made to order and can be cut to size right off the roll. Thermal Tech & Temp offers a variety of fabrics and styles for all types of welding applications. There are numerous fiberglass fabrics for light welding, grinding, and cutting as well as silica fabrics for heavy welding, slag, and spatter. Our blankets have the ability to withstand steady state temperatures of 1200°F-1800°F and can be reused.



KEY FEATURES:

- Highly re-usable
- Protects against sparks
- Shields against splatter
- Does not irritate skin
- Heavy duty



ORDERING INFORMATION

ORDERING INFORMATION

INDUCTION OVEN & FURNACE

PART NUMBER	DESCRIPTION
TTT-INDO-24-24	Cylinder Induction Oven, 24" diameter x 24" tall with 50 ft liquid cooled coil
TTT-INDO-36-36	Cylinder Induction Oven, 36" diameter x 36" tall with 80 ft liquid cooled coil
TTT-INDO-48-48	Cylinder Induction Oven, 48" diameter x 48" tall with 140 ft liquid cooled coil
TTT-INDO-60-60	Cylinder Induction Oven, 60" diameter x 60" tall with 160 ft liquid cooled coil
TTT-INDO-60-60-60	Rectangle Induction Oven, 60" wide x 60" tall x 60" long with 140 ft liquid cooled coil
TTT-INDO-48-48-96	Rectangle Induction Oven, 48" wide x 48" tall x 96" long with 160 ft liquid cooled coil

INDUCTION BLANKET

PART NUMBER	DESCRIPTION
TTT-INDB-6-240	Induction Blanket, 6" wide x 240" long with 80 ft coil, 4 TCs, handles, magnets & grommets
TTT-INDB-12-144	Induction Blanket, 12" wide x 144" long with 80 ft coil, 4 TCs, handles, magnets & grommets
TTT-INDB-16-120	Induction Blanket, 16" wide x 120" long with 80 ft coil, 4 TCs, handles, magnets & grommets
TTT-INDB-24-48	Induction Blanket, 24" wide x 48" long with 80 ft coil, 4 TCs, handles, magnets & grommets
TTT-INDB-24-96	Induction Blanket, 24" wide x 96" long with 140 ft coil, 4 TCs, handles, magnets & grommets
TTT-INDB-36-36	Induction Blanket, 36" wide x 36" long with 80 ft coil, 4 TCs, handles, magnets & grommets

INDUCTION HEAT CLAMP

PART NUMBER	DESCRIPTION
TTT-IHCLAMP-12	Induction Heat Clamp, 12" diameter with 30 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCLAMP-20	Induction Heat Clamp, 20" diameter with 50 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCLAMP-36	Induction Heat Clamp, 36" diameter with 50 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCLAMP-48	Induction Heat Clamp, 48" diameter with 80 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCLAMP-60	Induction Heat Clamp, 60" diameter with 80 ft liquid cooled coil, lifting stand & 4 TCs

INDUCTION HEAT CLAM SHELL

PART NUMBER	DESCRIPTION
TTT-IHCS-12	Induction Heat Clam Shell, 12" diameter with 30 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCS-20	Induction Heat Clam Shell, 20" diameter with 50 ft liquid cooled coil, lifting stand & 4 TCs
TTT-IHCS-36	Induction Heat Clam Shell, 36" diameter with 80 ft liquid cooled coil, lifting stand & 4 TCs

INDUCTION INTERNAL PLUGS

PART NUMBER	DESCRIPTION
TTT-PLUG-12	Induction Internal Plugs, 12" diameter x 24" long with lifting handles & protective sleeve
TTT-PLUG-24	Induction Internal Plugs, 24" diameter x 36" long with lifting handles & protective sleeve
TTT-PLUG-36	Induction Internal Plugs, 36" diameter x 36" long with lifting handles & protective sleeve
TTT-PLUG-48	Induction Internal Plugs, 48" diameter x 36" long with lifting handles & protective sleeve

ORDERING INFORMATION

INDUCTION COIL

PART NUMBER	DESCRIPTION
TTT-LIQC-30	Liquid Cooled Induction Coil, 30 ft long
TTT-LIQC-50	Liquid Cooled Induction Coil, 50 ft long
TTT-LIQC-80	Liquid Cooled Induction Coil, 80 ft long
TTT-LIQC-140	Liquid Cooled Induction Coil, 140 ft long
TTT-LIQC-160	Liquid Cooled Induction Coil, 160 ft long
TTT-AIRC-30	Air Cooled Induction Coil, 30 ft long
TTT-AIRC-50	Air Cooled Induction Coil, 50 ft long
TTT-AIRC-80	Air Cooled Induction Coil, 80 ft long

PROTECTIVE SLEEVE

PART NUMBER	DESCRIPTION
TTT-TUFSLV-30	Protective Sleeve made of TuffCoat material, 30 ft long
TTT-TUFSLV-50	Protective Sleeve made of TuffCoat material, 50 ft long
TTT-TUFSLV-80	Protective Sleeve made of TuffCoat material, 80 ft long
TTT-TUFSLV-140	Protective Sleeve made of TuffCoat material, 140 ft long
TTT-TUFSLV-160	Protective Sleeve made of TuffCoat material, 160 ft long

GROMMETS & MAGNETS

PART NUMBER	DESCRIPTION
TTT-GROM-4	Nickel Plated #4 Grommet
TTT-MAG-40	40 Pound Pull Magnet, 400°F temperature rating
TTT-MAG-60	60 Pound Pull Magnet, 400°F temperature rating

TEMPERATURE RECORDING

PART NUMBER	DESCRIPTION
TTT-TCK-60	Type K Spring Loaded Thermocouple, 60" with TC plug
TTT-PRMD-TCK-25	Premade Type K Thermocouple, 25 ft long
TTT-MALE-TC	Male Thermocouple Plug
TTT-FEMALE-TC	Female Thermocouple Plug
TTT-EXT-25-6	Thermocouple Extension Lead, 25 ft long with 6 cables & 1 loom
TTT-EXT-25-12	Thermocouple Extension Lead, 25 ft long with 12 cables & 1 loom
TTT-REC-12	12 Point Type K Thermocouple Recorder
TTT-REC-24	24 Point Type K Thermocouple Recorder

WELDING & KNEELING PAD

PART NUMBER	DESCRIPTION
TTT-WKP-24-48	Welding & Kneeling Pad, 2" thick x 24" wide x 48" long made from 22.0 oz kevlar fabric
TTT-WKP-36-48	Welding & Kneeling Pad, 2" thick x 36" wide x 48" long made from 22.0 oz kevlar fabric
TTT-WKP-24-24	Welding & Kneeling Pad, 2" thick x 24" wide x 24" long made from 22.0 oz kevlar fabric
TTT-WKP-48-48	Welding & Kneeling Pad, 2" thick x 48" wide x 48" long made from 22.0 oz kevlar fabric

WELDING CURTAIN

PART NUMBER	DESCRIPTION
TTT-WC-48-48	Welding Curtain, 48" wide x 48" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-72	Welding Curtain, 48" wide x 72" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-96	Welding Curtain, 48" wide x 96" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-120	Welding Curtain, 48" wide x 120" long made of 36.0 oz silica fabric with grommets

TTT-SIL-1800 DATA SHEET

TTT-SIL-1800 DATA

1

DESCRIPTION

TTT-SOLF-12 is a high temperature body low bio-persistence fiber that utilizes a unique spinning technology to create a special fiber with superior thermal and mechanical properties. This fiber is made from a blend of calcium, silica and magnesium and can be exposed to temperatures up to 2192°F.

2

APPLICATIONS

TTT-SOLF-12 is intended for use in removable insulation, cable trays, batteries, expansion joints, ovens, process furnace linings, structural steel fire protection, fire barriers, and more.

3

ADVANTAGES

The unique properties of TTT-SOLF-12 make it flexible, lightweight, inorganic, thermal shock, chemical attack and corrosion resistant with a low level of thermal conductivity and a high tensile strength for low heat storage. TTT-SOLF-12 is also a cost effective alternative to refractory ceramic fiber for applications to 2200°F. TTT-SOLF-12 also has excellent sound absorption, is high heat reflective and easy to fabricate and install.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	.5" +/- 10%	12.7 mm +/- 10%
Temperature Resistance	N/A	Max: 2200°F Operating: 2000°F	Max: 1200°C Operating: 1100°C
Linear Shrinkage	2000°F/24 hrs	0-1.5%	
Specific Heat	(Btu/lbs/F)	0.27	
Color:	N/A	White	

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TTT-SIL-3600 DATA SHEET

TTT-SIL-3600 DATA

1

DESCRIPTION

TTT-SIL-3600 is a medium weight silica fabric, tan in color, with superior physical and thermal characteristics compared to traditional silica fabrics. ANSI/FM 4950 approved for welding curtains. This material can meet MIL C24576A Type 1.

2

APPLICATIONS

TTT-SIL-3600 is intended for use in any application where high heat resistance and thermal protection is required, such as furnace curtains, stress relieving blankets, welding blankets and other heat shielding applications.

3

ADVANTAGES

The unique properties of TTT-SIL-3600 make it an extremely cost-effective alternative to regular silica fabrics with superior physical properties, such as abrasion resistance and breaking strength. The vermiculite coating that is on TTT-SIL-3600 performs a dual task. Initially it reduces the ability of the fabric to fray making it more workable through the cutting and sewing processes. The even greater duty of the vermiculite coating is to dissipate the heat across the fabric rather than allow heat from molten slag to fester in a single point allowing greater protection from molten slag going through the fabric. These factors along with the higher melting point of the amorphous silica allow TTT-SIL-3600 to be the fabric of choice where high heat resistance is desired.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	34.0 oz/sy +/- 10%	1156 g/m +/- 10%
Thickness	ASTM-D-1777	0050" +/- 10%	1.270 mm +/- 10%
Breaking Strength	ASTM-D-579	Warp: 200 lbs/in Fill: 100 lbs/in	Warp: 35.71 kg/cm Fill: 17.86 kg/cm
Temperature Resistance	N/A	Continuous Use: 1800°F Melting: 3000° F	Continuous Use: 982°C Melting: 1649°C
Linear Shrinkage:	5% at 1800° F	5% at 982.22 °C	
Base Fabric and Weave	N/A	Silica/8 Harness Satin	
Color:	N/A	Light Tan/Vermiculite	
Abrasion Resistance	MIL-C-24576A	20 Cycles/minute	
Width	N/A	35 inches	88.9 centimeters
Length	N/A	50 yards	45.72 meters

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TTT-HB-SRC DATA SHEET

TTT-HB-SRC DATA

1

DESCRIPTION

TTT-HB-SRC are made from a minimum of 96% pure amorphous silica cloth and are rated to 1800°F (980°C) with cured silicone rubber on one side. TTT-HB-SRC has been tested and rated to the ANSI/FM 4950 standard which is now required by the NFPA 51B. TTT-HB-SRC meets USCG164.009 as part of MIL-C-24576SH and meets NFPA 701-1999 Method 2 as well as MIL-STC-2041D Notice 2.

2

APPLICATIONS

TTT-HB-SRC is intended for welding/cutting protection, molten metal splash protection, heat and flame shielding, stress relief, insulation, hose and cable protection, emergency fire blankets, tadpole tapes, oven door seals and gasketing.

3

ADVANTAGES

The unique properties of TTT-HB-SRC make it a safe substitute for ceramic in refractory applications, the optimal choice for welding protection and flexible and chemical resistant with a low thermal conductivity and low halogens and soluble chlorides.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	29.0 oz/yd ² +/- 10%	822.136 g/m ² +/- 10%
Thickness	ASTM-D-1777	0.047" +/- 10%	1.194 mm +/- 10%
Temperature resistance	N/A	1800°F	982.22 °C
Coating temperature	N/A	500°F	260 °C
Melting point	N/A	3000°F	1648.889 °C
Linear shrinkage	N/A	1%	
Weight loss on ignition	N/A	1%	
Base Fabric and Weave	N/A	Herringbone	
Color:	N/A	Various colors	

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TTT-TEX-2 DATA SHEET

TTT-TEX-2 DATA

1

DESCRIPTION

TTT-TEX-2 is a high temperature resistant plain weave silica fabric with properties that include low thermal conductivity and ultra-low heat storage.

2

APPLICATIONS

TTT-TEX-2 is intended for flange and equipment covers, removeable insulation fabrics, expansion joints and welding blankets.

3

ADVANTAGES

The unique properties of TTT-TEX-2 make water, chemical, oil and it high temperature resistant, have low thermal conductivity and ultra-low heat storage. TTT-TEX-2 is also skin freindly and harmless to health.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	DIN EN ISO 5084	0.789" +/- 0.01"	2.0 mm +/- 0.3 mm
Area Weight	DIN EN 12127	30.97 oz/yd ² +/- 10%	1050 g/m ² +/- 10%
Threadcount Warp	DIN EN 1049-2		55 Fd./10cm +/- 3 Fd./10 cm
Threadcount Weft	DIN EN 1049-2		31 Fd./10cm +/- 3 Fd./10 cm
Tensile Strength Warp	DIN EN ISO 13934-1		> 2500 N/5 cm
Tensile Strength Weft	DIN EN ISO 13934-1		> 850 N/5 cm
Linear Shrinkage	PV 01362	< 3%	< 3%
Loss on Ignition	ISO 1887	< 3%	< 3%
Weave	N/A	Plain	
Color:	N/A	White	
Application Limit			1050°C ¹
Brief Peaks up to			1100°C ²

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TTT-TEX-4 DATA SHEET

TTT-TEX-4 DATA

1

DESCRIPTION

TTT-TEX-4 is a high temperature resistant twill weave silica fabric with properties that include low thermal conductivity and ultra-low heat storage.

2

APPLICATIONS

TTT-TEX-4 is intended for rugged terrain and conditions, abrasion-prone areas, expansion joints, pads, curtains, covers and sleeves.

3

ADVANTAGES

The unique properties of TTT-TEX-4 make it high temperature resistant, have low thermal conductivity and ultra-low heat storage. TTT-TEX-4 is also skin friendly and harmless to health. TTT-TEX-4 handles high temperatures better than most plain style silica fabrics due to the texturization of the silica yarn. TTT-TEX-4 also handles metal to metal abrasion with ease.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	59.0 oz/sqyd +/- 10%	2000.44 g/m ² +/-10%
Weight with coating	N/A	None	None
Temperature Resistance	N/A	1022°F	550°C
Melting Temperature	N/A	1544°F	840°C
Thickness	ASTM-D-1777	0.05 inches +/- 10%	1.27 mm +/- 10%
Thread count	N/A	Warp: 82 Fd/10 cm Weft: 30 Fd/10 cm	
Yarn count	N/A	Warp: 500 tex Weft: 820 tex	
Tensile strength	N/A	Warp: > 4000 N/5 cm Weft: > 1000 N/5 cm	
Base Fabric and Weave	N/A	Twill weave	
Color:	N/A	White	

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TTT-SRC-1700 DATA SHEET

TTT-SRC-1700 DATA

1

DESCRIPTION

TTT-SRC-1700 is a fiberglass fabric impregnated with silicone rubber. This high temperature, flame retardant silicone rubber provides improved resistance to abrasion, cutting, tearing and puncture. This product is designed specifically for high temperature (500 °F) removable insulation blankets for valves, flanges and fittings.

2

APPLICATIONS

TTT-SRC-1700 is intended for removable insulation blankets, flange covers, welding curtains, safety clothing, equipment covers and expansion joints.

3

ADVANTAGES

The unique properties of TTT-SRC-1700 make it water and oil resistant, UV resistant, flame retardant, low smoke, easily fabricated and lightweight.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	17.5 oz/sy +/- 10%	595 g/m +/- 10%
Thickness	ASTM-D-1777	.0018" +/- 0.001"	0.457 mm +/- 0.025 mm
Breaking Strength	ASTM-D-5035	Warp: 310 lbs/in Fill: 260 lbs/in	Warp: 55.37 kg/cm Fill: 0.43 kg/cm
Tear Strength	ASTM-D-5587	Warp: 58 lbs/min. Fill: 58 lbs/min	Warp: 26.25 kg/min. Fill: 26.25 kg/min.
Burst Strength	ASTM-D-3786	600 psi/min	42 kg/sqcm
Flame Resistance	ASTM-D-6413	Char Length: 1/16" max Afterglow: 1 sec. max Flame Out: 1 sec. max	Char Length: 0.159 cm max
UV Resistance	ASTM-G-154	1000 hours; no change	
Temperature Resistance	N/A	-85°F to 500°F	-65°C to 260°C
Base Fabric and Weave	N/A	Fiberglass/Satin Weave	
Color:	N/A	Silver Silicone	

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TTT-SRC-3400 DATA SHEET

TTT-SRC-3400 DATA

1

DESCRIPTION

TTT-SRC-3400 is a fiberglass fabric impregnated with a specially formulated silicone rubber designed to meet the rigid requirements for use in nuclear reactors. This product is designed specifically for high temperature (500 ° F) removable pads, flange and valve covers. This product can be manufactured to meet the requirements of NRC 1.36 as well as MIL-I-24244. This (Heavy Duty) silicone impregnated fiberglass fabric is used where more wear resistance is needed.

2

APPLICATIONS

TTT-SRC-3400 is intended for removable insulation pad covering, flange and valve covers, welding curtains and splash shields, safety clothing, equipment covers and flexible connectors (expansion joints).

3

ADVANTAGES

The unique properties of TTT-SRC-3400 make it water and oil resistant, acid and alkali resistant, flame retardant, low smoke, easily sewn, adhesive bonded or sealed. The special high temperature, flame retardant silicone rubber provides greater life and improved resistance to abrasion, flexing, tear and puncture.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	34.0 oz/sy +/- 10%	1156g/m ² +/- 10%
Thickness	ASTM-D-1777	.037" +/- 10%	0.940 mm +/- 10%
Breaking Strength	ASTM-D-5034	Warp: 400 lbs/in Fill: 350 lbs/in	Warp: 71.44 kg/cm Fill: 62.51 kg/cm
Tear Strength	ASTM-D-5587	Warp: 65 lbs/min. Fill: 55 lbs/min	Warp: 29.48 kg/min. Fill: 24.95 kg/min.
Burst Strength	ASTM-D-3786	750 psi/min	52.5 kg/sqcm
Flame Resistance	ASTM-D-6413	Char Length: 1" max Afterglow: 1 sec. max Flame Out: 1 sec. max	Char Length: 2.54 cm max
Temperature Resistance	N/A	-67°F to 500°F	-55°C to 260°C
Base Fabric and Weave	N/A	Fiberglass/Satin Weave	
Color:	N/A	Silver Silicone	
E-glass fabric	N/A	1200°F Melting Point	649°C Melting Point

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TTT-WELD-3500 DATA SHEET

TTT-WELD-3500 DATA

1

DESCRIPTION

TTT-WELD-3500 is an extremely heavy weight berglass made with highly texturized yarn creating a very "bulky" fabric. It is available in three different nishes - GR (Greige or Loomstate), WS (Weave Set Finish) or VCF (Vermiculite Coating for high temperature protection.)

2

APPLICATIONS

TTT-WELD-3500 is intended for uses where a heavy weight, thick (insulative) fabric is required with high heat resistance. The WS nish facilitates fabrication by reducing ravelling and fraying of cut edges. The VCF (Vermiculite Coating) nish provides a combination of high heat resistance and weave stability for use in fabrication items, such as mitts, gloves, aprons, removable blankets, expansion joints and strip curtains. Available in 40" (101.6 cm) and 60" (152.4 cm) widths.

3

ADVANTAGES

Due to the fact that TTT-WELD-3500 is a texturized fiber glass plain weave fabric, it is extremely durable with a high tensile strength and can handle temperatures up to 1200°F.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	35.0 oz/sy +/- 10%	1190 g/m ² +/- 10%
Thickness	ASTM-D-1777	0.080" +/- 10%	1.5424 mm +/- 10%
Tensile Strength	ASTM-D-5035	Warp: 470 lbs/in Fill: 250 lbs/in	Warp: 83.94 kg/cm Fill: 44.65kg/cm
Ends/Inch	ASTM-D-3775	Warp: 10 Fill: 8	
Temperature Resistance	N/A	GR and WS: 1000°F VCF: 1200°F continuous VCF: 1500°F intermittent	538°C : 649°C : 816°C VCF: 648.89 °C continuous VCF: 815 °C intermittent
Base Fabric and Weave	N/A	Fiberglass/Plain weave	
Color:	N/A	GR, WS: White; VCF: Tan	

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TTT-KEV-2200 DATA SHEET

TTT-KEV-2200 DATA

1

DESCRIPTION

TTT-KEV-2200 is a fairly modern fabric with an innumerable amount of applications across many industries. Known for its heat-resistance and incredible strength, KEVLAR has found itself used as an essential component in protective equipment used by all industrial fields for abrasion protection, high strength fabric for covers and blankets. TTT-KEV-2200 is an aramid fiber blend over a fiberglass core yarn. It can be used to produce high temperature sleeves, heat shields and curtains, tadpole seals, etc.

2

APPLICATIONS

TTT-KEV-2200 is intended for preheat blankets, kneeling pads, protecting hoses, cables, welding neck protector, low temperature heating blankets and welding gloves.

3

ADVANTAGES

TTT-KEV-2200 is most notably recognized for its durability and ability to withstand impact, due to its high tensile strength-to-weight-ratio. It is known to be five times stronger than steel. In terms of temperature, TTT-KEV-2200 can not only maintain its durability down to cryogenic temperatures, but is even found to be stronger in such conditions. In intense heat, the tensile strength is found to reduce by 10% after exposure to 160°C (320 °F) for 500 hours.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight	ASTM-D-3776	22.0 oz/sy +/- 10%	623.69 g/m ² +/- 10%
Thickness	ASTM-D-1777	0.08" +/- 10%	2.032 mm +/- 10%
Tensile Strength	ASTM-D-5035	Warp: 225 lbs/in Fill: 150 lbs/in	40.1804 kg/cm 26.787 kg/cm
Temperature Resistance	N/A	600°F	315.556 °C
Color:	N/A	Yellow and Green	

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TTT-ENM-12 DATA SHEET

TTT-ENM-12 DATA

1

DESCRIPTION

TTT-ENM-12 is manufactured to conform with the requirements of Military Specification MIL-1-16411 Type II, ASTM-C-1086-96 and Coast Guard Specification for Incombustible Materials #164.009 and MIL-I-24244. TTT-ENM-12 is a fiberglass mat composed of 100% "E" type glass bers 9-13 microns ln diameter which are put into web form and mechanically needles together without chemical binders.

2

APPLICATIONS

TTT-ENM-12 is intended for use as a thermal insulation and gasket material in home and industrial furnaces, package boiler and for special piping applications where heat resistance, exibility and low special air and liquid chemical and thermal resistance are mandatory.

3

ADVANTAGES

The unique properties of TTT-ENM-12 make it an effective low cost replacement for asbestos mats, millboard, ceramic or refractory paper, mat and sheets and mineral boards.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight		6 oz/sqft	1831.2 g/m ²
Thickness	ASTM-D-1777	1/2" +/- 10%	25.4 mm +/- 10%
Density		9 lbs/ft	144.2 kg/m ³
Temperature Resistance	N/A	Max: 1200°F	Max: 649°C
Flame Resistance	ASTM-E-84	Flame Spread: 0	
		Smoke Developed: 0	
Tensile Strength	N/A	Machine: 80 lbs	Machine: 36.2874 kg
		Cross machine: 60 lbs	Cross machine: 27.2155 kg
Acoustical Ratings	N/A	250 frequency: .07 +/- .02	
		500 frequency: .24 +/- .1	
		1000 frequency: .55 +/- .01	
		2000 frequency: .49 +/- .02	
		4000 frequency: .91 +/- .02	
Color:	N/A	White	

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TTT-ENM-25 DATA SHEET

TTT-ENM-25 DATA

1

DESCRIPTION

TTT-ENM-25 is manufactured to conform with the requirements of Military Specification MIL-1-16411 Type II, ASTM-C-1086-96 and Coast Guard Specification for Incombustible Materials #164.009 and MIL-I-24244. TTT-ENM-25 is a fiberglass mat composed of 100% "E" type glass bers 9-13 microns in diameter which are put into web form and mechanically needles together without chemical binders.

2

APPLICATIONS

TTT-ENM-25 is intended for use as a thermal insulation and gasket material in home and industrial furnaces, package boiler and for special piping applications where heat resistance, exibility and low special air and liquid chemical and thermal resistance are mandatory.

3

ADVANTAGES

The unique properties of TTT-ENM-25 make it an effective low cost replacement for asbestos mats, millboard, ceramic or refractory paper, mat and sheets and mineral boards.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Weight		15 oz/sqft	4578 g/m ²
Thickness	ASTM-D-1777	1" +/- 10%	25.4 mm +/- 10%
Density		11 lbs/ft ³	176.2 kg/m ³
Temperature Resistance	N/A	Max: 1200°F	Max: 649°C
Flame Resistance	ASTM-E-84	Flame Spread: 0	
		Smoke Developed: 0	
Tensile Strength	N/A	Machine: 125 lbs	Machine: 56.699 kg
		Cross machine: 90 lbs	Cross machine: 90.8233 kg
Acoustical Ratings	N/A	250 frequency: .15 +/- .04	
		500 frequency: .8 +/- .03	
		1000 frequency: 1.02 +/- .02	
		2000 frequency: 1.08 +/- .02	
		4000 frequency: .92 +/- .02	
Color:	N/A	White	

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TTT-TSM-12 DATA SHEET

TTT-TSM-12 DATA

1 DESCRIPTION

TTT-TSM-12 is a lightweight, high temperature insulation composed of 100% amorphous silica fiber that has been specially treated during the manufacturing process to reduce residual shrinkage at elevated temperatures.

2 APPLICATIONS

TTT-TSM-12 is intended for use in glass furnace crown insulation repair, nuclear insulation applications, acoustic insulation, insulating pads and blankets, high temperature & acid resistant gaskets, exhaust manifold insulation, stress relieving pads, high temperature pipe and valve insulation, welding protection, thermal and acoustic insulation for steam and gas turbines, expansion joints and more.

3 ADVANTAGES

The unique properties of TTT-TSM-12 make it binder free, highly resilient, non-respirable, fireproof and cost effective. TTT-TSM-12 also has outstanding chemical resistance, has excellent sound absorption and low shrinkage.

4 PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	1/2" +/- 10%	12.7 mm +/- 10%
Density		10.5 to 12.0 lbs/ft ³	168 to 192 kg/cc
Temperature Resistance	N/A	Intermittent: 2200°F Continuous: 2000°F Melting: 3100°F	Intermittent: 1200°C Continuous: 1100°C Melting: 1700°C
Linear Shrinkage	24 hrs at 1000°F (540°C) 24 hrs at 1200°F (990°C) 24 hrs at 1400°F (820°C) 24 hrs at 1600°F (1000°C) 24 hrs at 1800°F (1100°C) 24 hrs at 2000°F (1200°C)	0.05% 0.06% 0.06% 0.10% 0.30% 0.70%	
Thermal Conductivity	500°F (260°C) 1000°F (540°C) 1500°F (820°C) 1800°F (1000°C)	0.45 Btu-in/hr.ft 0.78 Btu-in/hr.ft 1.39 Btu-in/hr.ft 1.93 Btu-in/hr.ft	0.054 Kcal-m/hr.m ²⁰ C 0.094 Kcal-m/hr.m ²⁰ C 0.166 Kcal-m/hr.m ²⁰ C 0.231 Kcal-m/hr.m ²⁰ C
Color:	N/A	White	

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TTT-TSM-25 DATA SHEET

TTT-TSM-25 DATA

1

DESCRIPTION

TTT-TSM-25 is a lightweight, high temperature insulation composed of 100% amorphous silica fiber that has been specially treated during the manufacturing process to reduce residual shrinkage at elevated temperatures.

2

APPLICATIONS

TTT-TSM-25 is intended for use in glass furnace crown insulation repair, nuclear insulation applications, acoustic insulation, insulating pads and blankets, high temperature & acid resistant gaskets, exhaust manifold insulation, stress relieving pads, high temperature pipe and valve insulation, welding protection, thermal and acoustic insulation for steam and gas turbines, expansion joints and more.

3

ADVANTAGES

The unique properties of TTT-TSM-25 make it binder free, highly resilient, non-respirable, fireproof and cost effective. TTT-TSM-25 also has outstanding chemical resistance, has excellent sound absorption and low shrinkage.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	1" +/- 10%	25.4 mm +/- 10%
Density		10.5 to 12.0 lbs/ft ³	168 to 192 kg/cc
Temperature Resistance	N/A	Intermittent: 2200°F Continuous: 2000°F Melting: 3100°F	Intermittent: 1200°C Continuous: 1100°C Melting: 1700°C
Linear Shrinkage	24 hrs at 1000°F (540°C) 24 hrs at 1200°F (990°C) 24 hrs at 1400°F (820°C) 24 hrs at 1600°F (1000°C) 24 hrs at 1800°F (1100°C) 24 hrs at 2000°F (1200°C)	0.05% 0.06% 0.06% 0.10% 0.30% 0.70%	
Thermal Conductivity	500°F (260°C) 1000°F (540°C) 1500°F (820°C) 1800°F (1000°C)	0.45 Btu-in/hr.ft 0.78 Btu-in/hr.ft 1.39 Btu-in/hr.ft 1.93 Btu-in/hr.ft	0.054 Kcal-m/hr.m ^{20C} 0.094 Kcal-m/hr.m ^{20C} 0.166 Kcal-m/hr.m ^{20C} 0.231 Kcal-m/hr.m ^{20C}
Color:	N/A	White	

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TTT-SOLF-12 DATA SHEET

TTT-SOLF-12 DATA

1

DESCRIPTION

TTT-SOLF-12 is a high temperature body low bio-persistence fiber that utilizes a unique spinning technology to create a special fiber with superior thermal and mechanical properties. This fiber is made from a blend of calcium, silica and magnesium and can be exposed to temperatures up to 2192°F.

2

APPLICATIONS

TTT-SOLF-12 is intended for use in removable insulation, cable trays, batteries, expansion joints, ovens, process furnace linings, structural steel fire protection, fire barriers, and more.

3

ADVANTAGES

The unique properties of TTT-SOLF-12 make it flexible, lightweight, inorganic, thermal shock, chemical attack and corrosion resistant with a low level of thermal conductivity and a high tensile strength for low heat storage. TTT-SOLF-12 is also a cost effective alternative to refractory ceramic fiber for applications to 2200°F. TTT-SOLF-12 also has excellent sound absorption, is high heat reflective and easy to fabricate and install.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	.5" +/- 10%	12.7 mm +/- 10%
Temperature Resistance	N/A	Max: 2200°F Operating: 2000°F	Max: 1200°C Operating: 1100°C
Linear Shrinkage	2000°F/24 hrs	0-1.5%	
Specific Heat	(Btu/lbs/F)	0.27	
Color:	N/A	White	

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TTT-SOLF-25 DATA SHEET

TTT-SOLF-25 DATA

1

DESCRIPTION

TTT-SOLF-25 is a high temperature body low bio-persistence fiber that utilizes a unique spinning technology to create a special fiber with superior thermal and mechanical properties. This fiber is made from a blend of calcium, silica and magnesium and can be exposed to temperatures up to 2192°F.

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APPLICATIONS

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3

ADVANTAGES

The unique properties of TTT-SOLF-25 make it flexible, lightweight, inorganic, thermal shock, chemical attack and corrosion resistant with a low level of thermal conductivity and a high tensile strength for low heat storage. TTT-SOLF-25 is also a cost effective alternative to refractory ceramic fiber for applications to 2200°F. TTT-SOLF-25 also has excellent sound absorption, is high heat reflective and easy to fabricate and install.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	1" +/- 10%	25.4 mm +/- 10%
Temperature Resistance	N/A	Max: 2200°F Operating: 2000°F	Max: 1200°C Operating: 1100°C
Linear Shrinkage	2000°F/24 hrs	0-1.5%	
Specific Heat	(Btu/lbs/F)	0.27	
Color:	N/A	White	

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