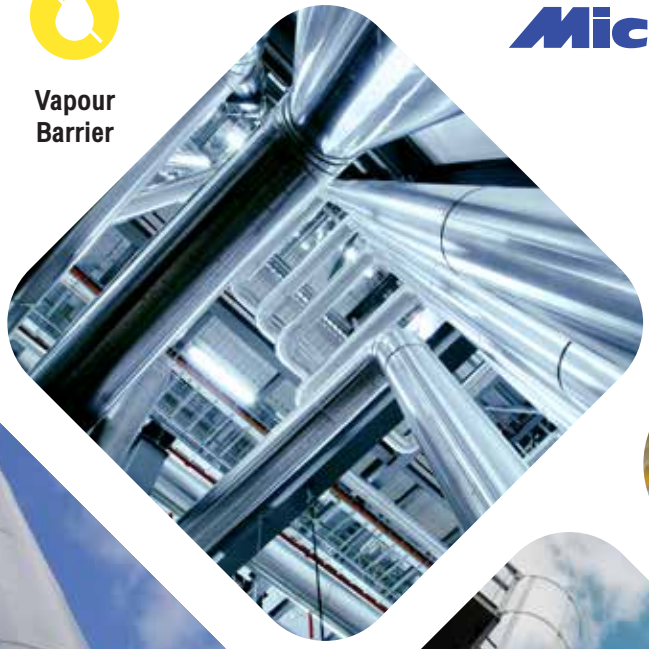
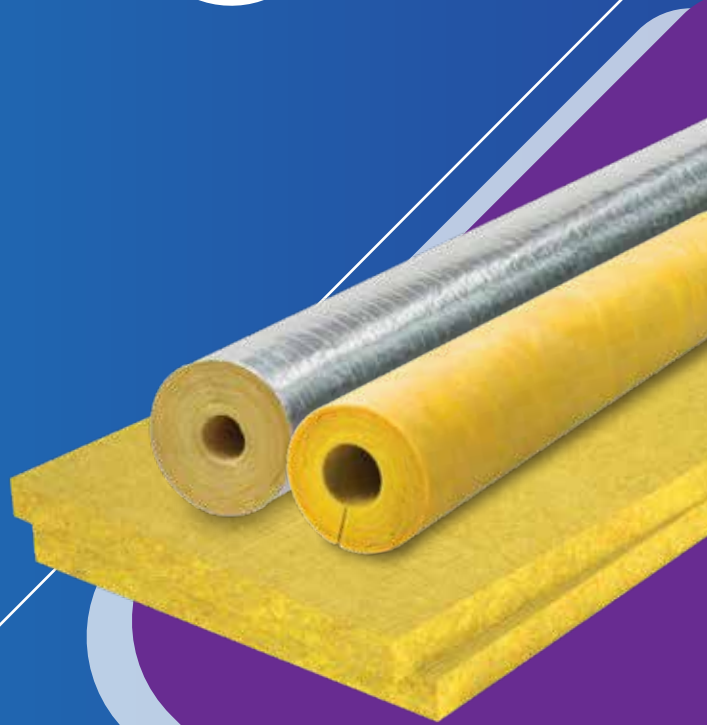
Thermal | Acoustic | Durable | Vapour Barrier

MicroFiber®



MicroFiber®
Thermal Insulation for Industrial



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MicroCover

Informations

MicroCover is a pipe with glass wool insulation covering with high temperatures resistant and Its thickness ranges from 56 to 112 Kg/m^3.
The standard length is 1 meter with 1/2 - 20 inches Diameter. Available in both non-surface coverings and face coverings with factory aluminum foil to prevent moisture, heat or cold leak.

MicroCover is an insulation manufactured according to the standard from TISI 486/2526 TISI 488/2526 and ASTM international standards

Applications

MicroCover is an effective insulation to prevent heat and cold loss and also control pipeline temperature such as steam pipelines, Hot/cold water pipeline and other pipelines including internal/external pipeline system from buildings, Factory, Hotel, Hospital, etc.

MicroCover Plain (64 kg/m^3 density) can be used to cover hot pipeline temperature at 450 °C (Max Service Temp)

*Please send enquiry for special product

MicroCover Use and Benefit

High performance insulation with thermal conductivity (K-Value) as below

Insulation type	K-Value at mean Temp 100°C Bty.in/ft².h.°F	W/m.K
Glass wool Insulation	0.29	0.042
Stone wool Insulation	0.31	0.045
Calcium Silicate	0.40	0.058

Strong insulation that does not easily fall off. It's an insulation with tiny and lengthy fibers. The fibers' adhesion is therefore firmly and tightly bound together.

High temperature resistant - It is a high temperature resistant insulation which can be used to insulate hot and cold water pipelines at temperatures ranging from -18°C to 450°C (0°F – 850°F) for more than 64 Kg/m^3 density of insulation.

FACING MATERIALS

MicroCover selected among high-quality facings material that increase protection of Heat and moisturein accordance with the specified standards and applications. Special facing materials as requests

*Please send enquiry for special product

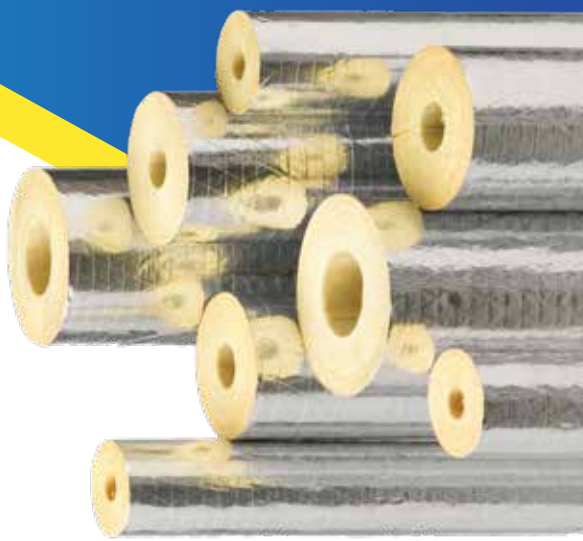
TISI 486 I 2526
TISI 488 I 2526

MicroCover Product Attibutes

Property	Teat Method	Specification
Operating Temperature Range	ASTM C411	-18 °C to 450 °C (850 °F) Hi-Temperature
Facing Temperature Limitation	ASTM C1136	-20 °C to 116 °C
Water Vapor Permeance	ASTM E96	0.02 perm
Water Vapor absorption	ASTM C1104	< 1.0 % at 49 °C, 95 % RH
Corrosivity	ASTM C665	Does not accelerate
Mold or Fungus Growth	ASTM C665	Will not support or promote
Surface Burning Characteristics	ASTM E84	Flame Spread < 25 Smoke Developed < 50

Economical Insulation density (Thickness Guideline)

Pipeline System	Fluid Temperature		Pipe Size					
	°C	°F	> Ø 1" (33 mm.)	Ø 1 1/2"- 2" (42-60 mm.)	Ø 2 1/2"- 4" (73-114 mm.)	Ø 5"- 6" (140-168 mm.)	Ø 8"- 12" (219-324 mm.)	Ø 14"- 20" (350-500 mm.)
Heat (steamed, Hot water)	152-238	306-450	Insulation thickness (Inches)					
High pressure	152-238	306-450	1.5 (38 mm.)	1.5 (38 mm.)	2.0 (50 mm.)	2.5 (63 mm.)	3.0 (75 mm.)	3.5 (88 mm.)
Medium pressure	122-151	251-305	1.5 (38 mm.)	1.5 (38 mm.)	2.0 (50 mm.)	2.0 (50 mm.)	2.5 (63 mm.)	3.0 (75 mm.)
Low Pressure	94-121	201-250	1.0 (25 mm.)	1.5 (38 mm.)	1.5 (38 mm.)	2.0 (50 mm.)	2.0 (50 mm.)	2.5 (63 mm.)
Low Temperature	122-151	251-305	1.0 (25 mm.)	1.0 (25 mm.)	1.5 (38 mm.)	1.5 (38 mm.)	1.5 (38 mm.)	2.0 (50 mm.)
Condensate	152-238	306-450	1.0 (25 mm.)	1.0 (25 mm.)	1.0 (25 mm.)	1.5 (38 mm.)	1.5 (38 mm.)	2.0 (50 mm.)



MicroCover Insulation Installation

MicroCover is a pipe insulation on which one side of the insulation is dissected and can be worn with the pipe. Also, along the tube's entire length, there are planes for surface covering extending to facilitate installation and prevent ability loss Both heated and cold. Aluminum tape is applied to cover the plane part of the protruding surface covering material as well as the gaps all along insulation.

Thermal Conductivity ASTM C335

Hot surface °C	Cold surface °C	Mean Temperature °C	Apparent Thermal Conductivity (W./m.K)
55.60	20.48	38.04	0.03246
134.58	24.11	79.35	0.03697
213.35	28.12	120.69	0.04146
293.95	33.08	163.52	0.04727
374.69	38.60	206.65	0.05456
454.33	44.83	249.58	0.06356

Product Dimensions

Steel Steam Pipe		Copper Pipe	
Pipe Size (Inch)	Outer Diameter (mm)	Pipe Size (Inch)	Outer Diameter (mm)
1/2	21.7	5/8	15.88
3/4	27.2	3/4	19.05
1	34.0	7/8	22.23
1 1/4	42.7	1 1/8	28.70
1 1/2	48.6	1 3/8	35.10
2	60.5	1 5/8	41.30
2 1/2	76.3	2 1/8	54.20
3	89.1	2 5/8	67.00
3 1/2	101.6	3 1/8	79.60
4	114.3	4 1/8	105.00
5	139.8	5 1/8	132.00
6	168.3	6 1/8	158.00
8	219.1	-	-
10	273.0	-	-
12	323.8	-	-
14	355.6	-	-
16	406.4	-	-
18	457.2	-	-
20	508.0	-	-

Remarks : standard density of 64kg/m^3 can be produced at 56-112 kg/m^3 density steel pipe can be produced up to 5 inches, copper pipe standard thickness is ¾"-2"

MicroHi-Temp

Informations

MicroHi-Temp is a glass wool insulation With sound absorption, high temperatures resistant and ecologically friendly manufacturing process suitable for applications requiring high temperature resistance of 350 °C. Also, Produced and formed into rolls and sheets. Apply a high-quality factory covering on the facing.
The insulation body is long-lasting, strong, and has been tested for its capacity to endure high temperatures in compliance with international requirements.

MicroHi-Temp is an insulation that is manufactured in compliance with industrial quality standards of TISI 486/2526, TISI 487/2526 and international standards of ASTM,UL,NFPA 90A and it also meets the standards for green buildings.

Applications

MicroHi-Temp is a manufactured and designed insulation used to prevent heat loss from surfaces with temperatures of up to 350 °C. It is light weight, simple to install and ideal for encapsulating tanks, pipelines such as hot air ducts, incubator wall, an oven wall, a boiler wall, and a fireproof door system also suitable for Kitchen, Hotel, Hospital, Buildings, industrial facilities, etc.

MicroHi-Temp Use and Benefit

- **High Temperature Resistance –** It is the insulation that is manufactured and designed to perform well on high temperature surfaces.

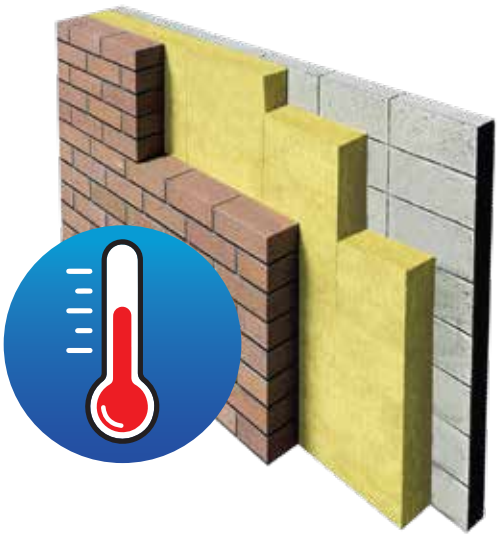
- **Durable –** It is insulation that has a long fiber, lightweight, allowing the fibers to cling together nicely and does not easily slip after and before usage.

- **ASTM C612 Standard** - It is a manufactured insulation that has achieved quality assurance in accordance with the international standard ASTM C612. As a result, the product's features and attributes are ensured.

Facing Materials

MicroHi-Temp Designed and selected from high-quality special sealer FR, which is fire-retardant, strong, and tear-resistant and features 3-ways reinforced glass fibers produced with fire Retardant Adhesive from factory. Special facing materials available such as non-combustion with high humidity resistance Double sided Aluminum foil.

*For special facing materials please send enquiry



High-temperature test approval

MicroHi-Temp is tested and certified with high heat resistance capability at 360°C .The insulation remains regular and provides sufficient thermal protection. It has been tested to comply with international standards of ASTM C411 (Hot Surface Performance of High- Temperature Thermal Insulation)

TISI 486 I 2526
TISI 488 I 2526

MicroHi-Temp Product Attibute

Property	Teat Method	Specification
Normal Density	ASTM C167	32 Kg/m^3, 40 Kg/m^3
Operating Temperature	ASTM C177	Up to 400 °C
Hot Surface Temperature	ASTM C411	Up to 540 °C
Water Vapor Sorption	ASTM C1104	1.0 % or less by volume
Shot Content	ASTM C612	Negligible
Non-Corrosive	ASTM C665	Will not accelerate
Resiss Mold or Fungus Growth	ASTM C665	Will not support or promote
Reaction to Fire	EN 13501-1	Class A1
Surface Burning Characteristics	ASTM E84	Flame Spread < 25 Smoke Developed < 50

MicroHi-Temp

Non-water absorbed insulation

Non water Absorption

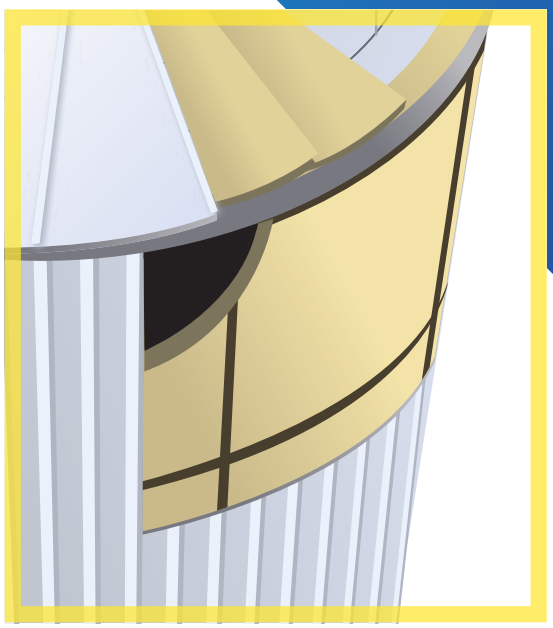
Special substances

Only for MicroFiber

Creates water-resistant insulation qualities.

Insulation development with unique qualities that prevent water and moisture. Establish trust and ensure long-term insulating performance.

MicroHi-Temp Insulation Installation



Thermal Conductivity (K-value)

Mean Temp (°C)	Thermal Conductivity (W./m.K)	
	32 Kg/m³	40 Kg/m³
100	0.046	0.041
150	0.059	0.049
200	0.074	0.058
250	0.098	0.068
300	0.129	0.080

Insulation Dimension

Product Type	Density Kg/m³	Thickness (mm.)	Width x Length (m. x m.)
Blanket	32	50	1.22 x 10.0
	32*	75	1.22 x 7.50
Slab	32	50	1.22 x 2.44
	32*	100	1.22 x 2.44
	40*	25	1.22 x 2.44
	40*	50	1.22 x 2.44
	40*	75	1.22 x 2.44
	40*	100	1.22 x 2.44

*Please send enquiry for special product

Industrial Project reference

KBS SUGAR
ENERGY COMPLEX

CPF NONGCHOK

PATUM VEGETABLE OIL

KI SUGAR

MICHELIN RAYONG

Thai Bev Group

MITR PHOL

KTIS – GGC

MicroCover
MicroHi-Temp

CERTIFICATION AND **SAFETY**

Glasswool Standard :
TIS 487-2526

Green Label :
Thailand

LEED :
Leadship in Energy and
Environment Design

Energy Saving Label

Carbon Reduction
Label

https://chill-flow.com/

CHILL FLOW ENERGY

บริษัท ชิวโฟล เอนเนอจี จำกัด

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