

SILIGLASS

HIGH SILICATE GLASS FIBER



Continuous Temp. 1000°C



Flame Resistance



Electrical Insulation



Flexibility

**PERFORMANCE YOU CAN TRUST.
PROTECTION THAT LASTS.**



NIPPON MUKI

*a member of **DAIKIN** group*

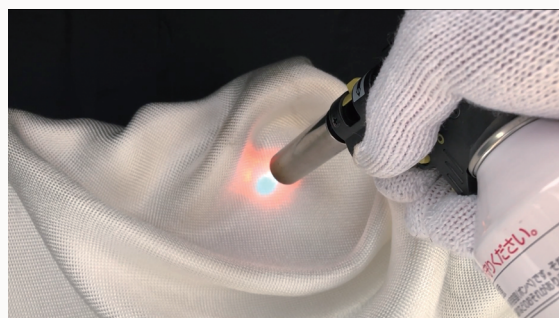
SILIGLASS

SILIGLASS High-Temperature Textiles are composed of silica fibers and specifically designed to replace asbestos in a variety of high-heat applications. The various forms within the SILIGLASS textile group offer excellent thermal insulation characteristics across a wide temperature range, with a melting point exceeding 1,700°C. Moreover, due to its exceptional thermal shock resistance, chemical stability, and electrical resistivity, SILIGLASS is increasingly utilized across various industrial sectors. All SILIGLASS textile forms (cloth, tape, sleeving, rope, yarn, and wool) share the same underlying chemical, physical, and mechanical properties.

Characteristics

- High silicate glass fiber with 96% or more SiO_2 * (silicon dioxide) *Reference Value
- Contains no asbestos
- Retains suppleness even after continuous use at high temperatures of 1000°C
- Heat shrinkage rate is small
- Excellent flame resistance
- Low dielectric constant and excellent electrical insulation

Maintains flexibility even after heating!!



Scan to watch!

Chemical Compositions

SILIGLASS High Temperature Textiles are manufactured through a chemical leaching of glass fibers, resulting in almost pure silica (SiO_2)

Composition	Measured Value (%)
SiO_2	98.9
Al_2O_3	0.44
CaO	0.07
Fe_2O_3	0.01

Composition	Measured Value (%)
MgO	0.01
Na_2O	0.02
K_2O	0.01
TiO_2	0.36

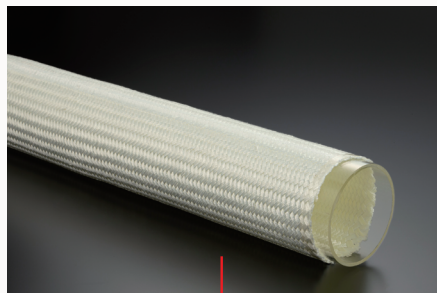
Applications of SILIGLASS

- Heat-resistant coating material for blast furnaces and heating furnaces
- Base material for fire-resistant and heat-resistant curtains
- Welding spark prevention sheet
- Base material for high temperature FRP
- Excellent flame resistance
- Conveyor roller coating material for tempered glass production line

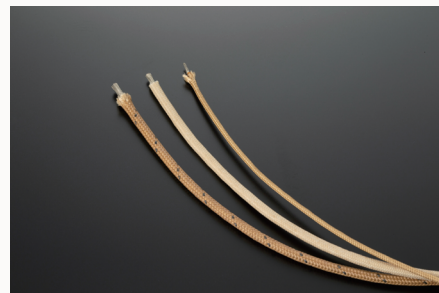
[Insulation cover]



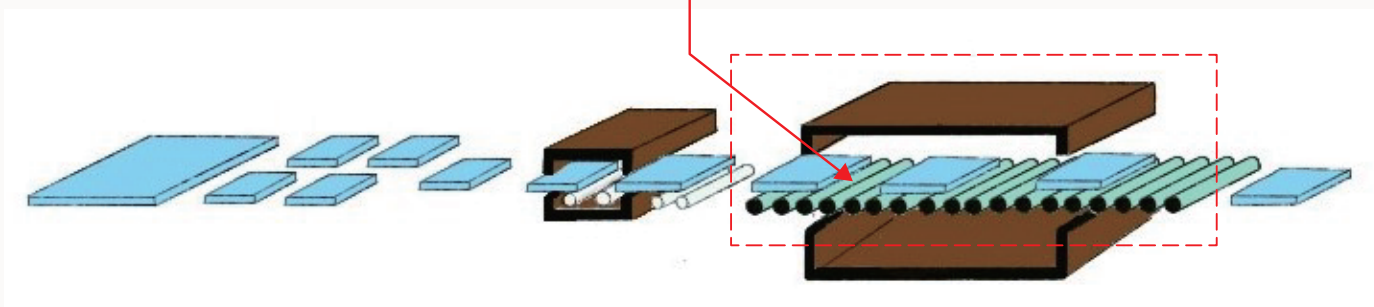
[Roller cover]



[Wire insulation]



- Improve the production yield of tempered glass by attaching a SILIGLASS SLEEVING to the transport roller



[FRP material]



Courtesy of JAXA

[Welding protection material]



Cloth

SILIGLASS cloths are very flexible with excellent drapability and offer a wide versatility of use in general industry. These materials have the capability of operating at 1,000°C continuously.

Especially, the new AD and U types, exhibiting tensile strength and abrasion resistance even greater than conventional silica fiber.



Standard Specifications

Product Code	Thickness (mm)	Width (mm)	Length (m)	Weight (g/m ²)	Product Tensile Strength (N/25mm)		Tensile Strength After Heating (N/25mm)		Heat Shrinkage (%)	Weave
					Warp	Weft	Warp	Weft		
BCA-328AD	0.3	1,000	150	280	≥200	≥100	≥100	≥50	≤7.0	Twill
BCS-665AD	0.65	1,000	50	570	≥490	≥294	≥196	≥98	≤7.0	Satin
BCS-665U	0.6	1,000	50	570	≥343	≥196	≥196	≥98	≤15.0	Satin
BCS-12AD	1.25	1,000	50	1,190	≥882	≥637	≥343	≥196	≤7.0	Satin
BCS-12U	1.2	1,000	50	1,070	≥735	≥490	≥343	≥196	≤15.0	Satin

- Heat shrinkage : Percentage of length reduction with 1100°C applied for 30 minutes.
- Tensile strength after heating : Retention of tensile strength after 30 minutes heating at 1100°C.
- AD: Acrylic Treatment, U: Without Firing

<Weaves>



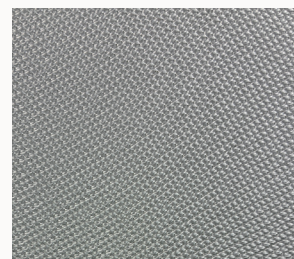
Twill

- Woven with a minimum of three yarns each for both warp and weft, creating a dense structure with distinct diagonal lines.



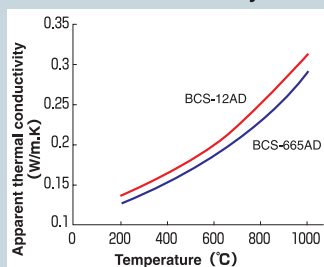
Satin

- Features widely spaced interlacing points with long float yarns.
- Left: Face (Warp) Right: Back (Weft)

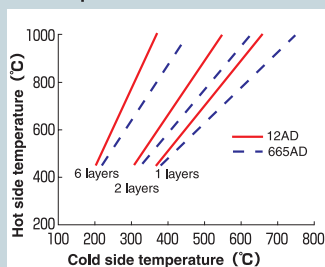


Typical Characteristics

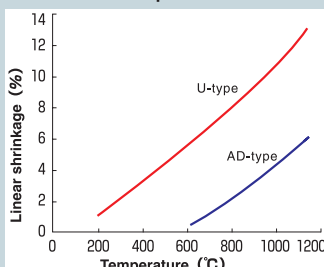
1. Typical Apparent Thermal Conductivity



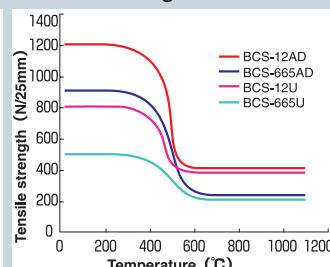
2. Hot Side / Cold Side Temperature



3. Typical Linear Shrinkage (30min. Exposure)



4. Tensile Strength After Heating



Tape, Sleeveing, Rope, Yarn

Similar to SILIGLASS cloths, these products are ideal for extreme high-temperature applications where conventional fiberglass and other standard materials would fail.



Standard Soecifications

Tape

Product Code	Thickness (mm)	Width (mm)	Length (m)	Product Tensile Strength (N/25mm)	Tensile Strength After Heating (N/25mm)	Heat Shrinkage (%)	Weave
BTA-425	0.35	25	50	≥137	≥98	≤7.0	Twill
BTA-450	0.35	50	50	≥137	≥98	≤7.0	Twill
BTA-625	0.6	25	50	≥196	≥137	≤7.0	Twill
BTA-650	0.6	50	50	≥196	≥137	≤7.0	Twill
BTN-1550U	1.5	50	50	≥196/width	≥137/width	≤15.0	Warp Backed

Sleeving

Product Code	Standard Inner Diameter (mm ϕ)	Pitch (Per 25mm)	Length (m)	Heat Shrinkage (%)
BS-1	1	18	30	≤7.0
BS-2	2	17	30	≤7.0
BS-3	3	15	30	≤7.0
BS-5	5	15	30	≤7.0
BS-8	8	17	30	≤7.0
BS-20	20	13	30	≤7.0

Custom diameters from $\phi 19$ to $\phi 95$ are available upon request, backed by our proven manufacturing track record.

Rope

Product Code	Standard Outer Diameter (mm ϕ)	Standard Length (m)	Heat Shrinkage (%)	Braid
BRA-25U	25	20	≤15	Entwinement

Yarn

Product Code	Count (g/km)	Product Tensile Strength (N/yarn)	Tensile Strength After Heating (N/yarn)	Heat Shrinkage (%)
BY-450	455	≥39	≥11.8	≤7.0
BY-850	850	≥78	≥19.6	≤7.0

- Heat shrinkage : Percentage of length reduction with 1100°C applied for 30 minutes.
- Tensile strength after heating : Retension of tensile strength after 30 minutes heating at 1100°C.

Efforts in Energy Conservation, Creating Comfortable Environments, etc. Versatile Applications Across Wide-Ranging Industries.

1. Combination of SILIGLASS and Other Materials (Glass Cloth and AES*)

*Alkaline Earth Silicate Wool

■ Insulation Covers



■ Diffusion Furnace Seals



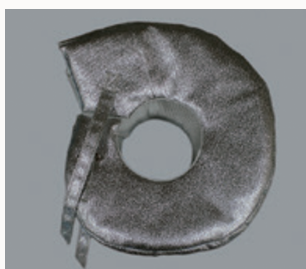
■ Sealing Materials



■ Exhaust Dust Covers

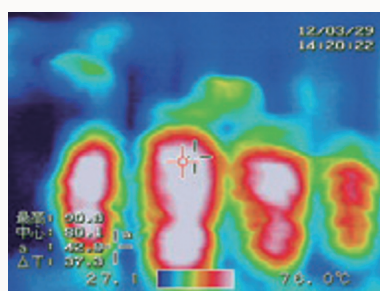
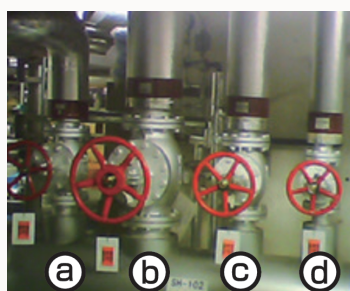


■ Turbocharger Covers



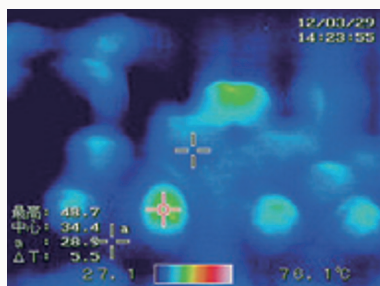
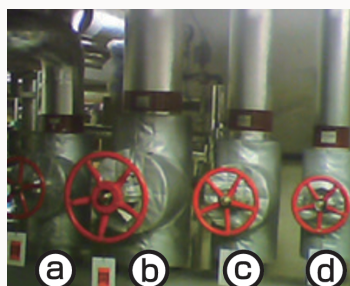
2. Case Studies: Thermal Measurement for Energy Savings

■ Without Insulation Covers



	Temperature(°C)
Atmosphere	26.5
a. Left Header	87.2
b. Left-Center Header	90.8
c. Right-Center Header	83.9
d. Right Header	66.1

■ With Insulation Covers



	Temperature(°C)
Atmosphere	24.8
a. Left Header	37.4
b. Left-Center Header	48.7
c. Right-Center Header	40.6
d. Right Header	39.8

Company Overview

■ Corporate Name

NIPPON MUKI CO., LTD

■ Founded

June 17, 1939

■ Business Details

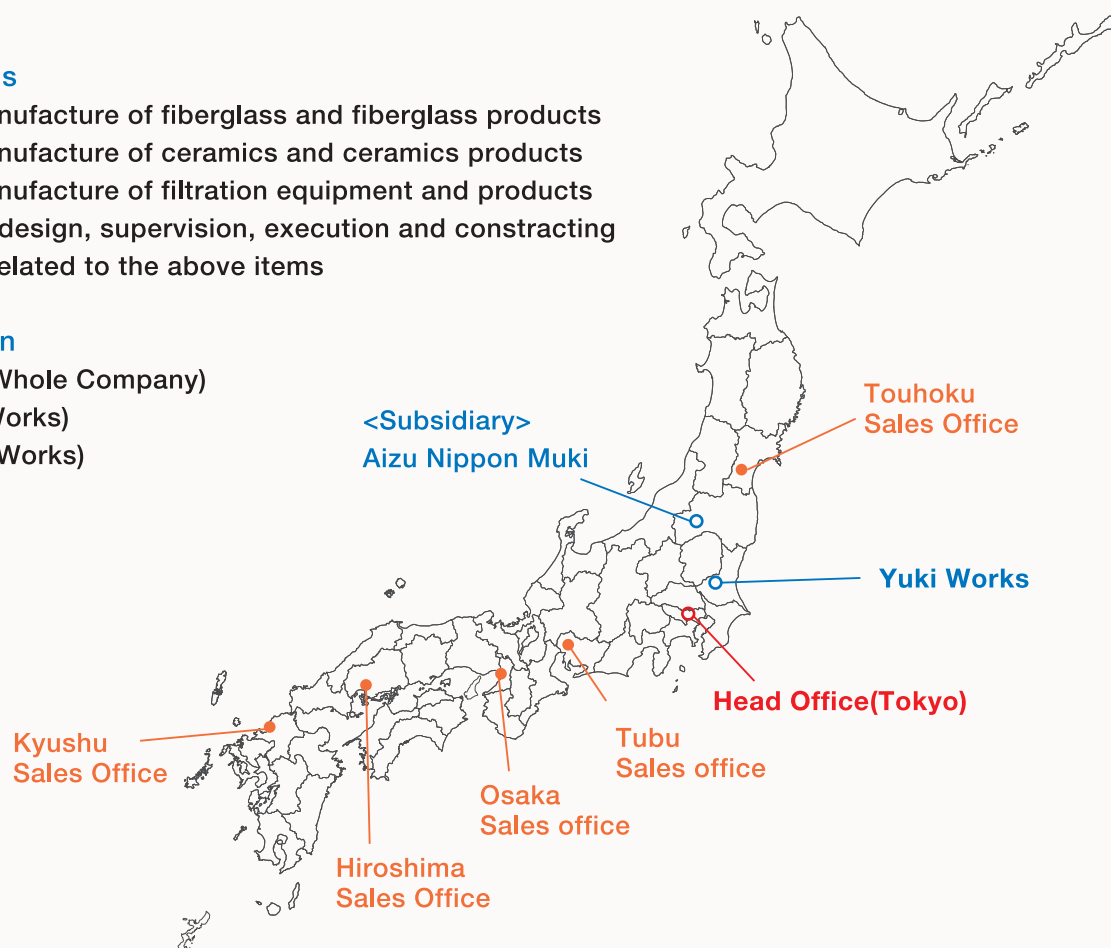
1. Sales and manufacture of fiberglass and fiberglass products
2. Sales and manufacture of ceramics and ceramics products
3. Sales and manufacture of filtration equipment and products
4. Construction design, supervision, execution and constructing
5. All business related to the above items

■ ISO Certification

ISO14001 (The Whole Company)

ISO9001 (Yuki Works)

ISO45001 (Yuki Works)



Yuki Works

NIPPON MUKI CO., LTD.
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