

SILIFLAM®

THS 1000 Series

+ 500°C to + 800°C *

CHARACTERISTICS

Physical-chemical

- Working temperature: 500 °C to 800 °C *
- Good resistance to thermal shock and ageing.
- Good resistance to mould and humidity.
- Improved resistance to aggressive environments and humidity: ref. THS 1030 and THS 1050.
- Improved resistance to radiation and thermal shock: ref. THS 1050.

Electrical

- Working voltage: up to 600/1000 V.
- Test voltage: 2500 V.
- Improved dielectric strength: ref. THS 1030 and THS 1050.

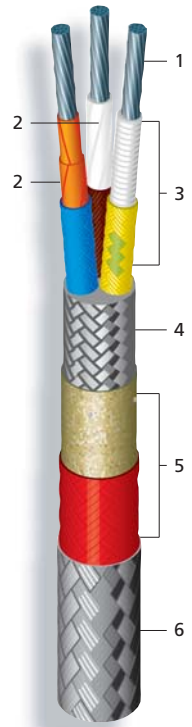
PRODUCTS

- Ref. **THS 1000**: insulation and sheathing type THS 1000.
- Ref. **THS 1030**: insulation and sheathing type THS1000 with Teflon® PTFE reinforcement.
- Ref. **THS 1050**: insulation and sheathing type THS 1000 with Kapton® polyimid reinforcement.

PACKAGING

- Rolls or drums.

- 1 - Flexible nickel-plated copper core - ASTM B 355.
- 2 - (Optional) Teflon® PTFE tape or 2 Kapton® polyimid thermo-welded tapes.
- 3 - Composite insulation type THS 1000 in coated mineral fibre.
- 4 - (Optional) Electrical screen braid in nickel-plated copper.
- 5 - Composite sheathing type THS 1000 in mica and coated mineral fibre.
- 6 - (Optional) Outer shielding in stainless steel AISI 304.



APPLICATIONS

- Any high/low current cabling in high-risk environments (fire, projections of metal or molten glass, aggressive environments, explosive atmospheres, etc.).
- Any installations that are permanently subjected to very high temperatures.



* As per general conditions (see next page)

DESIGNATION

| SILIFLAM® THS 1000 M | SILIFLAM® THS 1030 M | SILIFLAM® THS 1050 M |
|---------------------------------|---------------------------------|---------------------------------|
| SILIFLAM® THS 1000 M - BI | SILIFLAM® THS 1030 M - BI | SILIFLAM® THS 1050 M - BI |
| SILIFLAM® THS 1000 M - BCN | SILIFLAM® THS 1030 M - BCN | SILIFLAM® THS 1050 M - BCN |
| SILIFLAM® THS 1000 M - BCN - BI | SILIFLAM® THS 1030 M - BCN - BI | SILIFLAM® THS 1050 M - BCN - BI |

U: SINGLE-CONDUCTOR - M: MULTICONDUCTOR
 — Outer shielding in stainless steel
 — Electrical screen braid in nickel-plated copper

CROSS-SECTIONS

| Minimum mm ² | Maximum mm ² |
|-------------------------|-------------------------|
| 0.22 | 2.5 |
| 4 | 6 |
| 10 | 95 |

NUMBER OF CONDUCTORS

| Minimum | Maximum |
|---------|---------|
| 2 | 37 |
| 2 | 24 |
| 2 | 5 |

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SILIFLAM[®] THS

Very high safety cables for industrial applications

+ 500°C to + 1400°C

GENERAL

SILIFLAM[®] THS are very high safety cables made from high-performance materials such as mica; mineral and ceramic fibres; special glass, quartz, borosilico-aluminate; polyimide; polytetrafluorethylene, etc.

They are available in standard format or specially designed by our engineers and technicians for high-risk industrial applications and all installations continuously subject to very high temperatures.

OPERATING TEMPERATURES AND PARAMETERS

Series SILIFLAM[®] THS 1000: + 500°C to + 800°C.

Series SILIFLAM[®] THS 1200: + 600°C to + 1000°C.

Series SILIFLAM[®] THS 1400: + 800°C to + 1200°C.

Series SILIFLAM[®] THS 1500: + 1000°C to + 1400°C.

The temperatures indicated above are a general guide only. They essentially show the range of temperatures the insulation for the cable selected can withstand without suffering any significant deterioration in its electrical properties which could be detrimental to the installation.

They relate to exposure times of varying length and depend on the various parameters for the installation:

- type of heat source: electrical resistance, metals or glass in fusion (spraying or immersion) ; infra-red radiation, flames, oven sides, etc.;
- proximity to that heat source;
- length of cable exposed,
- frequency and period of exposure,
- quality and type of connections,
- fitting conditions,
- ambient conditions (humidity, steam, corrosive atmosphere, etc.),
- thermal exchange conditions (confinement, natural or forced convection, etc.),
- mechanical conditions (squashing, pinching, movement, blows, vibration, etc.),
- electrical conditions (acceptable current in each conductor, voltage used, heating allowed, insulation resistance required - this decreasing greatly according to the temperature).

For thermal dimensioning, it should be noted that the various influencing factors tend to combine which in particular could result in the following phenomena:

- thermal runaway (corrosion of the conductor metal, more often than not at the connection, resulting in a rise in resistance and the cable breaking at the connection)
- premature or even very rapid ageing of the insulating material
- a change in the electrical properties of the metals.

A change in one of the installation's parameters or the combined action of more than one of them may have a great influence on the temperature range the cable can withstand and tests under actual conditions are strongly recommended.

Our technical department will be happy to supply technical data or to design a solution suitable for your requirements.

Under no circumstances can we be held responsible in the event of damage suffered by the cable and/or its surroundings.

PRODUCTS

- Single-conductors: between 0.22 mm² and 630 mm².
- Multi-conductors: between 0.22 mm² and 2.5 mm²: 2 to 37 conductors between 4 and 6 mm²: 2 to 24 conductors between 10 and 95 mm²: 2 to 5 conductors.
- Colours of cover:
Series SILIFLAM[®] THS 1000 and 1200: red.
Series SILIFLAM[®] THS 1400 and 1500: natural white.
Other colours: consult us.
- Colour of conductors:
Series SILIFLAM[®] THS 1000 and 1200: as per IEC 446.
Series SILIFLAM[®] THS 1400 and 1500: natural white or as per IEC 446.

APPLICATIONS

- Heavy industry: iron, foundries, steel and glass.
- Chemical, nuclear, petroleum and mechanical industries.
- Aeronautics, avionics, space, railway and naval industries.
- Any installations subjected to very high temperatures.



STANDARDS

SILIFLAM[®] THS cables satisfy the requirements of the most rigorous international standards in terms of fire behaviour: IEC 331, IEC 332-1, IEC 332-3, ANSI/IEEE 383, NFC 32070, VDE 0472/814, MIL W 25038, NBN C 30-004, etc.

OPTIONS

- Special and hybrid cables in the SILIFLAM[®] THS range, customized designs to your specifications. Consult us.
- SILIFLAM[®] THS cables can also be manufactured with pyrometric quality (thermocouple, extension, compensation, platinum resistance temperature detector connections); cables for heating by induction, over-sheathing of standard cables, etc. Consult us.
- Conducting cores in other high temperature metals (237% nickel-plated copper, NiCr, FeCrAl, CuNi, etc.) or refractory metals (tantalum, tungsten, titanium, molybdenum, etc.). Consult us.
- AWG cross-sections. Consult us.

DESIGNATION

Example :

SILIFLAM[®] THS 1230 M - BCN - BI
SILIFLAM[®] THS xxxx x - xxx - xx

Insulator and sheath type (see technical data sheet):

1000 - 1030 - 1050 - 1200 - 1230 - 1250 - 1400 - 1450 - 1500 - 1550.

U: single conductor - M: multi-conductor (except THS 1000).

BCN (optional): electrical screen braid in nickel-plated copper (for multi-conductors only).

BI (optional): outer shielding in stainless steel.