

## BRAIDED INSULATING SLEEVINGS





- The world's leading manufacturer of silicone-insulated wires and cables
- Europe's leading manufacturer of glass-yarn braids
- France's leading manufacturer of fire safety cables

The Omerin group has been producing electrical cables for extreme conditions since 1959



At Omerin, we use our know-how and technology to develop increasingly high-performance products.

Our expertise is recognized in over 120 countries.



Omerin offers a wide range of high-performance products covering a large number of applications in very diverse industries, including the electrothermal construction, electromechanical, chemical, nuclear energy, railway, automotive, naval, aerospace, heavy industry, power plant and other sectors.

Our product range is further extended by varnished, impregnated and treated braided insulating sleevings, door seals for ovens, fireproof sleevings, thermocouple, extension and compensation cables as well as industrial braids.

## Men and women at your service

The technical expertise of our teams is at your disposal, providing responses and solutions to all your requirements.

Our Methods, Quality and Research and Development Departments work permanently together with the aim of constantly improving our products and processes.

All our staff subscribe to this approach with their involvement and constant self-checking at all stages of production.

#### List of all the available catalogues:

HIGH TEMPERATURE WIRES AND CABLES
FOR THE GENERAL MARKET
SECTION I: CROSS LINKED ELASTOMERS

HIGH TEMPERATURE WIRES AND CABLES
FOR THE GENERAL MARKET
SECTION II: FLUOROPOLYMERS
AND THERMOPLASTICS

HIGH TEMPERATURE WIRES AND CABLES
FOR THE GENERAL MARKET
SECTION III: COMPOSITE INSULATIONS

FIRE RESISTANT SAFETY CABLES 4

CABLE SOLUTIONS FOR ROLLING STOCK 6

CABLES FOR POWER STATIONS 6
AND HIGH-RISK SITES

MARINE CABLES

PYROMETRY CABLES 8

BRAIDED INSULATING SLEEVINGS 🗿

HIGH TEMPERATURE MEDIUM VOLTAGE POWER CABLES

CABLE SOLUTIONS FOR AUTOMOTIVE AND E-MOBILITY

PACKAGING AND TECHNICAL DATA

Ultimately, this catalogue is the result of the passionate endeavours of an entire team, who have displayed great talent in writing it for you.

It is designed to be a simple and concise working tool for you, serving as a reference document that is able to meet the majority of your needs.

This catalogue, as well as ten others from our collection are available on line with real time updates and much more information at

#### www.omerin.com

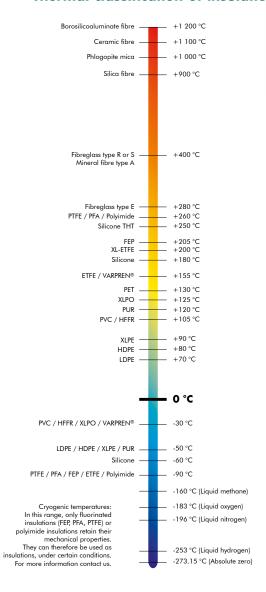
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BIO-HABITAT®	Wires and cables for a home without electromagnetic interference
CERAFIL®	Miniature ceramic insulated wires for very high temperatures
COAXRAIL®	Coaxial cables for railway industry
<b>COAXTHERM®</b>	High temperature coaxial cables
COUPLIX®	Pyrometry cables (thermocouples, extension, compensation cables)
DATARAIL®	Data cables for the railway industry
ELECTROAIR®	Aerospace & Defence wires and cables
ENERSYL®	Electrical cables for power station and high risk sites
FLEXBAT®	Extra flexible battery cables
LUMIPLAST®	Wires and cables for lighting systems
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MINOROC®	Very high tensile strength synthetic cables
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MULTI-VX®	Hybrid data and power cables
ODIOSIS®	Sound, amplification and loudspeaker cables
OILPLAST®	Cables for industrial environments and intrinsically safe system
OMBILIFLEX®	High performance special multi-function cables
<b>PLASTHERM®</b>	Special thermoplastic insulated wires and cables
POWER CONNECT®	High performance power cords
<b>PROFIPLAST®</b>	Thermoplastic insulated wires and cables
PYRISOL®	Fire resistant power cables for safety circuits
PYRITEL®	Fire resistant communication cables for safety circuits
SILIBOX®	Wire and cables cardboard box packaging system
SILICABLE®	Special high temperature wires and cables
SILICOUL®	Low and medium voltage class H (180°C) power cables
SILIFLAM®	Very high safety cables for extreme temperatures
SILIFLON®	Fluoropolymer insulated high temperature wires and cables
SILIGAINE®	Braided insulating sleevings
SILIRAD®	Electron beam cross-linked cables
SILITUBE®	Braided or extruded tubes
SOLARPLAST®	Power cables for photovoltaic solar panels
SONDIX®	Platinum resistance temperature sensors connection cables
SPIRFLEX®	High performance spiral cables
TEXALARM®	Cables for safety systems and fire alarms
TS CABLES®	Coaxial and data cables
TS COM 900®	Telephonic cables for very speed reception
TS LAN®	Copper LAN cables
TWINLINK®	High temperature controlled impedance twisted pair cables
TWINPLAST®	Extra flexible cables for battery chargers or jump starters
VARPREN®	Wires and cables with special cross-linked Varpren® insulation
VEROX®	Fiberglass braided seals

VIDEOCOAX® Analog and digital video cables



#### Thermal classification of insulations























# **Product list**

# ELECTRIC INSULATING SLEEVINGS CLASS F - ACRYLIC COATING

FT No.	PRODUCT REFERENCE	PAGE
9202	SILIGAINE 16F2SILIGAINE 16F3SILIGAINE 16F7 UL	11

# ELECTRIC INSULATING SLEEVINGS CLASS H and C - SILICONE RUBBER COATING

FT No.	PRODUCT REFERENCE	PAGE
9301	SILIGAINE 15C2	14
9302	SILIGAINE 15C3	15
9303	SILIGAINE 15C3-UV	16
9304	SILIGAINE 15C4	17
9305	SILIGAINE 15C4.d	18
9306	SILIGAINE 15C5	19
9307	SILIGAINE 15C5-E	20
9308	SILIGAINE 15C7 Grade A UL	21
9309	SILIGAINE 15C10	22
9310	SILIGAINE 15C1.5	23

# HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS

FT No.	PRODUCT REFERENCE	PAGE
9401	SILIGAINE 21F1	26
9402	SILIGAINE 24C1	27
9403	SILIGAINE 31-1	28
9404	SILIGAINE 31C1E	29
9405	SILIGAINE GT 1	30
9406	SILIGAINE GTE 1	31

# VERY HIGH TEMPERATURE PROTECTIVE SLEEVINGS

FT No.	PRODUCT REFERENCE	PAGE
9501	SILIGAINE 33SI	34
9502	SILIGAINE GSIL	35
9503	SILIGAINE 33NX	36

#### OTHER PROTECTIVE SLEEVINGS

FT No.	PRODUCT REFERENCE	PAGE
9601	SILIGAINE 22P1	38
9602	SILIGAINE TN	39
9603	SILIGAINE TN-FR	40
9604	SILIGAINE TN-FR TWIST	41

#### SPECIAL SLEEVINGS AND OVEN SEALS

FT No.	PRODUCT	REFERENCE	PAGE





# ELECTRIC INSULATING SLEEVINGS CLASS F ACRYLIC COATING

FT No.	PRODUCT REFERENCE	APPROVAL	PAGE
9201	SILIGAINE 16F2	<i>51</i>	10
9202	SILIGAINE 16F3	<b>91.</b>	11
9203	SILIGAINE 16F7 UL	c <b>SN</b> us	12

# SILIGAINE® 16F2 -30°C to +155°C Class F

FIBREGLASS BRAIDED SLEEVING WITH ACRYLIC COATING ELECTRIC INSULATING SLEEVINGS CLASS F ACRYLIC COATING





#### Standards\*

- IEC 60684-1 and 60684-2. IEC 60684-3 part 405.
- UL approval, category UZKX2: meets the requirements of the horizontal flame test File no.: E310331.

## **Applications**

- Internal cabling for rotating and static machines, classes B and F (motors, alternators, generators, transformers, inductors, etc.).
  - Sheathing of cable harnesses, all insulations classes B and F.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

- Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameters from 5 to 10 mm: 100 m rolls. Diameters from 12 to 20 mm: 50 m rolls.
  - Diameters from 22 to 25 mm: 25 m rolls.

#### **Characteristics** General

- Continuous operating temperature: -30 °C to +155 °C.
- Good resistance to humidity and common chemical environments.
- Compatible with most impregnation varnishes class F.
- Flame retardant as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): Central value: 1.8 kV. Lowest value: 1.2 kV.

#### Standard products

Colour: yellow.

	INTERNAL	DIAMETER
ackaging		

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.20	0.20	1.7
0.8	± 0.20	0.20	2.2
1	± 0.25	0.20	2.5
1.5	± 0.25	0.20	3.4
2	± 0.25	0.20	4.4
2.5	± 0.25	0.20	5.4
3	± 0.25	0.20	6.5
3.5	± 0.30	0.20	7.6
4	± 0.30	0.30	8.8
4.5	± 0.30	0.30	10.0
5	± 0.30	0.30	11.3
6	± 0.30	0.30	14.1
7	± 0.40	0.30	17.1
8	± 0.40	0.30	20.3
9	± 0.50	0.30	23.7
10	± 0.50	0.40	27.4
12	± 1.0	0.40	35.5
14	± 1.0	0.40	44.5
16	± 1.0	0.40	61.4
18	± 1.0	0.40	77.5
20	± 1.0	0.40	100
22	± 1.5	0.40	130
25	± 2.0	0.50	142

16F2

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The information provided in this technical data sheet is indicative and may be modified without prior notice, laying, wiring and electrical conditions and the environment of the cable can not be fully considered in our studies. In some cases, for production purposes, a separating tape may be added between two successive layers. In no way the company OMERIN shall be held responsible for any incidents in the case of inappropriate uses, particularly in the case of wiring conditions that do not respect the good practice and the standards in force. For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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\*Standards: our products comply with all or part of the requirements of standards quoted; contact us

# SILIGAINE® 16F3 -30°C to +155°C Class F

FIBREGLASS BRAIDED SLEEVING WITH ACRYLIC COATING



ELECTRIC INSULATING SLEEVINGS CLASS F ACRYLIC COATING



#### Standards\*

- IEC 60684-1 and 60684-2. • IEC 60684-3 part 404.
- VERITAS approval certificate No. 153626.
  - UL approval, category UZKX2: meets the requirements of the horizontal flame test File no.: E310331.

#### **Applications**

- Internal cabling for rotating and static machines, classes B and F (motors, alternators, generators, transformers, inductors, etc.).
- · Sheathing of cable harnesses, all insulations classes B and F.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

#### **Packaging**

 $\bullet$  Diameters from 0.5 to 4.5 mm: 200 m spools. • Diameters from 5 to 13 mm: 100 m spools. • Diameters from 14 to 22 mm: 50 m spools. • Diameter 25 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -30 °C to +155 °C.
- Good resistance to humidity and common chemical environments.
- · Compatible with most impregnation varnishes class F.
- Flame retardant as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): Central value: 3.3 kV. Lowest value: 2.5 kV.

#### Standard products

• Colour: yellow.

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1	6	F	3

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.20	0.20	2.0
0.8	± 0.20	0.20	2.7
1	± 0.25	0.20	3.2
1.5	± 0.25	0.20	4.5
2	± 0.25	0.20	5.8
2.5	± 0.25	0.20	7.2
3	± 0.25	0.20	8.6
3.5	± 0.30	0.20	10.0
4	± 0.30	0.30	11.6
4.5	± 0.30	0.30	13.1
5	± 0.30	0.30	14.8
6	± 0.30	0.30	18.2
7	± 0.40	0.30	21.8
8	± 0.40	0.30	25.7
9	± 0.50	0.40	27.5
10	± 0.50	0.40	31.0
12	± 1.0	0.50	43.2
14	± 1.0	0.60	56.2
16	± 1.0	0.70	70.2
18	± 1.0	0.70	85.0
20	± 1.0	0.80	105
22	± 1.5	0.80	133
25	± 2.0	0.80	145

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us

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# SILIGAINE® 16F7 UL -30 °C to +155 °C Class F

FIBREGLASS BRAIDED SLEEVING WITH ACRYLIC COATING ELECTRIC INSULATING SLEEVINGS CLASS F ACRYLIC COATING



#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 403. • UL approval 1441, category UZFT2 and CSA C22.2 no. 198.3, category UZFT8: Grade A acrylic coated fiberglass sleeving File no.: E189100.

## **Applications**

- Internal cabling for rotating and static machines, classes B and F (motors, alternators, generators, transformers, inductors, etc.).
  - Sheathing of cable harnesses, all insulations classes B and F.

#### **Options**

· Other diameters: contact us. • Other colours: contact us.

## • Sleevings cut to length: contact us.

## **Packaging**

• Diameters from 0.5 to 1.5 mm: 200 m rolls. Diameters from 2 to 4.5 mm: 100 m rolls. Diameters from 5 to 16 mm: 50 m rolls.

#### **Characteristics** General

c **SU** us

- Continuous operating temperature: -30 °C to +155 °C.
- Good resistance to humidity and common chemical environments.
- · Compatible with most impregnation varnishes class F.
- Flame retardant as per standard UL 1441.
- Grade A as per UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): Central value: 7 kV. Lowest value: 5 kV.

#### **Standard products**

Colour: yellow.

#### INTERNAL DIAMETER

#### 16F7 UL

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.20	0.25	1.4
0.8	± 0.20	0.25	2.3
1	± 0.25	0.25	2.9
1.5	± 0.25	0.35	4.5
2	± 0.25	0.35	6.1
2.5	± 0.25	0.40	7.7
3	± 0.25	0.40	9.4
3.5	± 0.30	0.40	11.2
4	± 0.30	0.50	13.0
4.5	± 0.30	0.50	14.9
5	± 0.30	0.50	16.8
6	± 0.30	0.50	20.9
7	± 0.40	0.50	25.1
8	± 0.40	0.50	29.6
9	± 0.50	0.65	34.3
10	± 0.50	0.65	39.3
12	± 1.0	0.65	49.8
14	± 1.0	0.65	61.3
16	± 1.0	0.65	73.6

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

# ELECTRIC INSULATING SLEEVINGS CLASS H and C - SILICONE RUBBER COATING

F	FT No.	PRODUCT REFERENCE	APPROVAL	PAGE
		CILIO AIN IE 1 500	<b></b>	1.4
,	9301	SILIGAINE 15C2	<b>,51</b>	14
9	9302	SILIGAINE 15C3	<b>.71</b> 💮	15
9	9303	SILIGAINE 15C3-UV	CNEP	16
9	9304	SILIGAINE 15C4	.51	17
9	9305	SILIGAINE 15C4.d		18
9	9306	SILIGAINE 15C5		19
9	9307	SILIGAINE 15C5-E		20
9	9308	SILIGAINE 15C7 Grade A UL	c <b>Al</b> us	21
9	9309	SILIGAINE 15C10		22
9	9310	SILIGAINE 15C1.5	.91	23

## SILIGAINE® 15C2 -60 °C to +250 °C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING





#### Standards\*

 IEC 60684-1 and 60684-2. IEC 60684-3 part 402. • UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1. File no.: E212701.

## **Applications**

• Internal cabling for rotating machines classes H and C (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

#### **Packaging**

• Diameters from 0.5 to 4.5 mm; 200 m rolls. • Diameter 5 mm: 100 m rolls. • Diameters from 6 to 16 mm: 100 m spools. • Diameters from 18 to 30 mm: 50 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): 2.5 kV.

#### Standard products

Colour : brick red.

#### INTERNAL DIAMETER

#### 15C2

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.20	2.4
0.8	± 0.15	0.20	3.0
1	± 0.20	0.20	3.4
1.5	± 0.20	0.20	4.5
2	± 0.20	0.25	5.7
2.5	± 0.20	0.25	6.9
3	± 0.20	0.25	8.2
3.5	± 0.25	0.25	9.5
4	± 0.25	0.30	11.0
4.5	± 0.25	0.30	12.4
5	± 0.25	0.30	14.0
6	± 0.25	0.35	17.2
7	± 0.25	0.35	20.7
8	± 0.25	0.35	24.4
9	± 0.50	0.45	28.4
10	± 0.50	0.45	32.7
12	± 0.50	0.45	54.0
14	± 1.0	0.45	73.6
16	± 1.0	0.55	91.8
18	± 1.0	0.65	110.0
20	± 1.0	0.70	129.0
25	± 1.0	0.90	154.0
30	± 2.0	1.00	193.0

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

## SILIGAINE® 15C3 -60 °C to +250 °C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING



ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING

15C3



#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 401. VERITAS approval certificate No. 153626. UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1. (diameters from 0.5 to 16 mm) File no.: E212701.

## **Applications**

• Internal cabling for rotating machines classes H and C (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Aluminised silicone coating: SILIGAINE® 15C3 ALU. Sleevings cut to length: contact us.

#### **Packaging**

• Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameter 5 mm: 100 m rolls. • Diameters from 6 to 16 mm: 100 m spools. • Diameters from 18 to 22 mm: 50 m spools. • Diameters from 25 to 40 mm: 25 m spools. • Diameters > 40 mm: 20 m spools.

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#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): > 3 kV.

#### Standard products

IN

Colour : brick red.

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.20	2.4
0.8	± 0.15	0.20	3.0
1	± 0.20	0.20	3.4
1.5	± 0.20	0.20	4.5
2	± 0.20	0.25	5.7
2.5	± 0.20	0.25	6.9
3	± 0.20	0.25	8.2
3.5	± 0.25	0.25	9.6
4	± 0.25	0.30	11.1
4.5	± 0.25	0.30	12.6
5	± 0.25	0.30	14.2
6	± 0.25	0.40	17.5
7	± 0.25	0.40	21.1
8	± 0.25	0.40	24.9
9	± 0.50	0.50	29.0
10	± 0.50	0.50	33.3
12	± 0.50	0.50	54.6
14	± 1.0	0.50	77.2
16	± 1.0	0.60	92.7
18	± 1.0	0.75	112
20	± 1.0	0.75	134
22	± 1.0	0.90	158
25	± 1.0	0.90	197
30	± 2.0	1.00	267
35	± 2.0	1.10	327
40	± 3.0	1.30	389
45	± 4.0	1.50	480
50	± 5.0	1.60	580

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

# SILIGAINE® 15C3-UV -60 °C to +250 °C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING RESISTANCE TO UV RAYS

#### ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING



- **Standards** IEC 60684-1 and 60684-2.
- Certificate of resistance to UV CNEP no. NS JR 2011-557.

IEC 60684-3 part 401.

## **Applications**

• Protection of cables, wiring harnesses, etc. against UV radiation.

This sleeving has been developed specially for lasting protection in normal outside conditions.

#### **Options**

• Other diameters: contact us. • Sleevings cut to length: contact us.

#### **Packaging**

- Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameter 5 mm: 100 m rolls.
- Diameters from 6 to 16 mm: 100 m spools. • Diameters from 18 to 22 mm: 50 m spools.
- Diameters from 25 to 40 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV (direct exposure, outside conditions).
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- · Very good flexibility.
- Halogen-free.

#### **Electrical**

Dielectric strength (dry): > 3 kV.

#### Standard products

Colour : brick red.

#### INTERNAL DIAMETER

#### 15C3-UV

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.20	2.4
0.8	± 0.15	0.20	3.0
1	± 0.20	0.20	3.4
1.5	± 0.20	0.20	4.5
2	± 0.20	0.20	5.7
2.5	± 0.20	0.20	6.9
3	± 0.20	0.20	8.2
3.5	± 0.25	0.20	9.6
4	± 0.25	0.30	11.1
4.5	± 0.25	0.30	12.6
5	± 0.25	0.30	14.2
6	± 0.25	0.30	17.5
7	± 0.25	0.30	21.1
8	± 0.25	0.30	24.9
9	± 0.50	0.30	29.0
10	± 0.50	0.40	33.3
12	± 0.50	0.40	54.6
14	± 1.0	0.40	77.2
16	± 1.0	0.40	92.7
18	± 1.0	0.40	112
20	± 1.0	0.40	134
22	± 1.0	0.40	158
25	± 1.0	0.40	197
30	± 2.0	0.40	267
35	± 2.0	0.40	327
40	± 2.0	0.40	389

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

# SILIGAINE® 15C4 -60 °C to +250 °C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING





#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400 to 402. • UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1. (diameters from 0.5 to 16 mm) File no.: E212701.

#### **Applications**

 Internal cabling for rotating machines classes H and C (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Aluminised silicone coating: 15C4 ALU ref, contact us • More flexible sleeving (thin walls): SILIGAINE® 15C4L

• Other diameters: contact us. · Other colours: contact us.

• Sleevings cut to length: contact us.

#### **Packaging**

 $\bullet$  Diameters from 0.5 to 4.5 mm: 200 m spools. • Diameters from 5 to 16 mm: 100 m spools. • Diameters from 18 to 22 mm: 50 m spools. • Diameters from 25 to 40 mm: 25 m spools.

• Diameters > 40 mm: 20 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

Dielectric strength (dry): > 4 kV.

#### Standard products

Colours: brick red or black.

#### INTERNAL DIAMETER

#### 15C4

Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.25	3.3
0.8	± 0.15	0.25	3.9
1	± 0.20	0.25	4.2
1.5	± 0.20	0.25	5.2
2	± 0.20	0.30	6.3
2.5	± 0.20	0.30	7.4
3	± 0.20	0.30	8.6
3.5	± 0.25	0.30	9.9
4	± 0.25	0.40	11.3
4.5	± 0.25	0.40	12.8
5	± 0.25	0.40	14.3
6	± 0.25	0.40	17.6
7	± 0.25	0.50	21.2
8	± 0.25	0.50	25.2
9	± 0.50	0.50	29.4
10	± 0.50	0.50	34.0
12	± 0.50	0.50	56.9
14	± 1.0	0.50	74.0
16	± 1.0	0.70	100
18	± 1.0	0.85	123
20	± 1.0	0.85	147
22	± 1.0	0.95	171
25	± 1.0	0.95	207
30	± 2.0	1.00	272
35	± 2.0	1.10	358
40	± 3.0	1.30	455
45	± 4.0	1.50	570
50	± 5.0	1.60	670

\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

## For this product, please contact:

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# SILIGAINE® 15C4.d -60 °C to +200 °C Class H

1st FIBREGLASS BRAID WITH SILICONE RUBBER COATING 2nd FIBREGLASS BRAID WITH ACRYLIC COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING



#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400 to 402.

#### **Applications**

- Internal cabling for rotating machines class H (motors, alternators, generators, transformers, inductors, etc.).
- All insulations up to 200 °C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

## **Packaging**

- Diameters from 4 to 10 mm: 100 m spools. • Diameters from 12 to 16 mm: 50 m spools.
- Diameters from 18 to 22 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +200 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Very good resistance to abrasion.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): > 4 kV.

#### **Standard products**

Colour: black.

INTERNAL DIAMETER			15C4.d		
Nominal value (mm)	Tolerance (mm)	1 <sup>st</sup> braid Approximate wall thickness (mm)	2 <sup>nd</sup> braid Approximate wall thickness (mm)	Approximate linear weight (kg/km)	
4	± 0.25	0.60	0.45	8.1	
6	± 0.25	0.60	0.45	19.9	
8	± 0.25	0.60	0.45	37.0	
10	± 0.50	0.80	0.45	59.3	
12	± 0.50	0.80	0.45	86.8	
14	± 1.0	0.80	0.45	120	
16	± 1.0	0.90	0.50	158	
18	± 1.0	1.00	0.50	201	
20	± 1.0	1.00	0.60	249	
22	± 1.0	1.00	0.60	303	

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

#### For this product, please contact:

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## SILIGAINE® 15C5 -60 °C to +250 °C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING



#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400.

## **Applications**

 Internal cabling for class H and C rotating machines (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

· Other diameters: contact us. • Other colours: contact us.

• Sleevings cut to length: contact us.

## **Packaging**

- Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameter 5 mm: 100 m rolls.
- Diameters from 6 to 14 mm: 100 m spools.
- Diameters from 16 to 22 mm: 50 m spools.
  - Diameter 25 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

Dielectric strength (dry): > 5 kV.

#### Standard products

Colour : brick red.

#### INTERNAL DIAMETER

#### 15C5

Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.50	3.7
0.8	± 0.15	0.50	4.2
1	± 0.20	0.50	4.7
1.5	± 0.20	0.50	5.7
2	± 0.20	0.50	6.9
2.5	± 0.20	0.50	8.2
3	± 0.20	0.50	9.5
3.5	± 0.25	0.50	10.9
4	± 0.25	0.60	12.4
4.5	± 0.25	0.60	14.0
5	± 0.25	0.60	15.7
6	± 0.25	0.60	19.4
7	± 0.25	0.60	23.3
8	± 0.50	0.60	27.7
9	± 0.50	0.80	32.3
10	± 0.50	0.80	37.3
12	± 1.0	0.80	62.5
14	± 1.0	0.80	80.8
16	± 1.0	0.90	101
18	± 1.0	1.00	124
20	± 1.0	1.00	148
22	± 1.0	1.00	174
25	± 1.0	1.20	217

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

# SILIGAINE® 15C5-E

Expandable -60°C to +250°C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING

#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400 to 402.

## **Applications**

· Internal cabling for rotating machines classes H and C (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us.

## • Sleevings cut to length: contact us. **Packaging**

- Diameters from 0.5 to 1.5 mm: 200 m rolls. • Diameters from 2 to 4 mm: 100 m rolls.
  - Diameters from 5 to 16 mm: 50 m rolls.

#### ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING



#### **Characteristics** General

- Continuous operating temperature: -60°C to +250°C.
- Expandable up to about twice the nominal diameter.
- · Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): > 5 kV.

#### Standard products

Colour: black.

#### INTERNAL DIAMETER

ı	5	C	5	-	Ī

Nominal value (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	0.25	2.6
1	0.25	5.1
1.5	0.35	7.7
2	0.35	10.2
2.5	0.40	12.7
3	0.40	15.2
4	0.50	20.1
5	0.50	24.9
6	0.50	29.6
7	0.50	34.2
8	0.50	38.7
10	0.65	47.6
12	0.65	56.0
14	0.65	64.1
16	0.65	71.9

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

#### For this product, please contact:

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# SILIGAINE® 15C7 **Grade A UL** -60°C to +250°C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING

#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400 to 402. • UL approval 1441, category UZFT2 and CSA C22.2 no. 198.3, category UZFT8: Grade A silicone coated fiberglass sleeving File no.: E189100.

## **Applications**

• Internal cabling for class H and C rotating machines (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

## **Options\***

• Other diameters: contact us. • Other colours: contact us. Sleevings cut to length: contact us.

#### **Packaging**

• Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameters from 5 to 14 mm: 100 m rolls. • Diameter 16 mm: 50 m rolls.

#### **Characteristics** General

- Continuous operating temperature: -60°C to +250°C.
- · Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.

SILICONE RUBBER COATING

ELECTRIC INSULATING SLEEVINGS CLASS H and C

- Grade A as per UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): > 7 kV.

#### Standard products

Colour : brick red or black.

#### INTERNAL DIAMETER

#### 15C7 Grade A UL

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.25	1.9
0.8	± 0.15	0.25	3.0
1	± 0.20	0.25	3.8
1.5	± 0.20	0.35	5.7
2	± 0.20	0.35	7.7
2.5	± 0.20	0.40	9.7
3	± 0.20	0.40	11.7
3.5	± 0.25	0.50	13.8
4	± 0.25	0.50	16.0
4.5	± 0.25	0.50	18.1
5	± 0.25	0.50	20.3
6	± 0.25	0.50	24.9
7	± 0.25	0.50	29.6
8	± 0.25	0.50	34.4
9	± 0.50	0.65	39.4
10	± 0.50	0.65	44.6
12	± 0.50	0.65	55.4
14	± 1.0	0.65	66.8
16	± 1.0	0.65	78.9

<sup>\*</sup>Options: some options will not have UL and CSA approval; contact us.

#### For this product, please contact:

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BRAIDED INSULATING SLEEVINGS

# SILIGAINE® 15C10 -60°C to +250°C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING



#### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 400 to 402.

#### **Applications**

• Internal cabling for class H and C rotating machines (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

#### **Packaging**

• Diameters from 0.5 to 3.5 mm: 200 m rolls. • Diameters from 4 to 5 mm: 100 m rolls. • Diameters from 6 to 10 mm: 100 m spools. • Diameters from 12 to 22 mm: 50 m spools. • Diameter 25 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- · Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

Dielectric strength (dry): > 10 kV.

#### Standard products

Colour : brick red.

INTERNAL	DIAMETER

#### 15C10

Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.60	4.0
0.8	± 0.15	0.60	4.8
1	± 0.20	0.60	5.4
1.5	± 0.20	0.60	6.9
2	± 0.20	0.60	8.5
2.5	± 0.20	0.60	10.3
3	± 0.20	0.60	12.1
3.5	± 0.25	0.60	14.0
4	± 0.25	0.70	16.0
4.5	± 0.25	0.70	18.1
5	± 0.25	0.70	20.3
6	± 0.25	0.70	25.1
7	± 0.25	0.70	30.2
8	± 0.25	0.70	35.7
9	± 0.50	0.90	41.6
10	± 0.50	0.90	48.0
12	± 0.50	0.90	67.5
14	± 1.0	1.00	100
16	± 1.0	1.20	130
18	± 1.0	1.20	157
20	± 1.0	1.30	181
22	± 1.0	1.30	203
25	± 1.0	1.40	229

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## \*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

## SILIGAINE® 15C1.5 -60°C to +250°C Classes H and C

FIBREGLASS BRAIDED SLEEVING WITH SILICONE RUBBER COATING ELECTRIC INSULATING SLEEVINGS CLASS H and C SILICONE RUBBER COATING





#### Standards\*

 IEC 60684-1 and 60684-2. IEC 60684-3 part 402. • UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1. File no.: E212701.

#### **Applications**

• Internal cabling for rotating machines classes H and C (motors, alternators, generators, transformers, inductors, etc.). All insulations up to 250°C permanent in the electric and electronic constructions, heating appliances, lighting, automobile, measuring, control, etc.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

#### **Packaging**

• Diameters from 0.5 to 4.5 mm; 200 m rolls. • Diameter 5 mm: 100 m rolls. • Diameters from 6 to 16 mm: 100 m spools. • Diameters from 18 to 30 mm: 50 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Good resistance to humidity, ozone and UV.
- Good resistance to common chemical environments.
- · Compatible with most impregnation varnishes class H.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Very good flexibility.
- Halogen-free.

#### **Electrical**

• Dielectric strength (dry): 1.5 kV.

#### Standard products

Colour: brick red.

#### INTERNAL DIAMETER

#### 15C1.5

Nominal value (mm)	Tolerance (mm)	Minimum wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.15	0.15	2.2
0.8	± 0.15	0.15	2.7
1	± 0.20	0.15	3.1
1.5	± 0.20	0.15	4.1
2	± 0.20	0.15	5.1
2.5	± 0.20	0.15	6.2
3	± 0.20	0.20	7.4
3.5	± 0.25	0.20	8.6
4	± 0.25	0.25	10.0
4.5	± 0.25	0.25	11.1
5	± 0.25	0.25	12.6
6	± 0.25	0.35	15.5
7	± 0.25	0.35	18.6
8	± 0.25	0.35	21.9
9	± 0.50	0.45	25.6
10	± 0.50	0.45	29.4
12	± 0.50	0.45	48.6
14	± 1.0	0.45	66.2
16	± 1.0	0.55	82.6
18	± 1.0	0.65	99.0
20	± 1.0	0.70	116.2
22	± 1.0	0.85	138.8
25	± 1.0	0.90	173.5
30	± 2.0	1.00	241.0

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.



# HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS

FT No.	PRODUCT REFERENCE	APPROVAL	PAGE
9401	SILIGAINE 21F1	<i>1</i> .7.1	26
9402	SILIGAINE 24C1	<b>!!!</b>	27
9403	SILIGAINE 31-1	<b>.71</b>	28
9404	SILIGAINE 31C1E	<i>IR</i> .	29
9405	SILIGAINE GT 1		30
9406	SILIGAINE GTE 1		31

BRAIDED INSULATING SLEEVINGS

# SILIGAINE® 21F1 -60 °C to +280 °C

FIBREGLASS BRAIDED SLEEVING IMPREGNATED WITH HEAT-RESISTANT VARNISH HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS





#### Standards\*

 IEC 60684-1 and 60684-2. • UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1 (diameters from 0.8 to 25 mm) File no.: E212701.

#### **Applications**

- Cabling for heating elements. Domestic electrical appliances.
- Cooking appliances, overs, air ovens, driers, convectors.

• Lights.

 Sheathing of cable harnesses for cables subject to high temperature and mechanical constraints.

#### **Options**

· Other diameters: contact us. • Sleevings cut to length: contact us. Double braid sleeving: SILIGAINE® 21F2. • Triple braid sleeving: SILIGAINE® 21F3.

#### **Packaging**

• Diameters from 0.5 to 4.5 mm: 200 m rolls. Diameters from 5 to 12 mm: 100 m rolls. • Diameters from 14 to 20 mm: 50 m rolls. • Diameters from 22 to 50 mm: 25 m rolls.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +280 °C.
- Good resistance to thermal shock and UV.
- Very good mechanical strength and resistance to abrasion.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.

#### **Electrical**

• Dielectric strength (dry): 0.8 to 1.2 kV.

#### Standard products

Colour: black.

INT	ERN	IAL	DIA	M E	TER

Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.20	0.20	0.5
0.8	± 0.20	0.20	1.3
1	± 0.25	0.20	1.8
1.5	± 0.25	0.20	3.2
2	± 0.25	0.20	4.5
2.5	± 0.25	0.20	5.9
3	± 0.25	0.20	7.2
3.5	± 0.30	0.20	8.6
4	± 0.30	0.30	9.9
4.5	± 0.30	0.30	11
5	± 0.30	0.30	12
6	± 0.30	0.30	13
7	± 0.40	0.30	13
8	± 0.40	0.30	14
9	± 0.50	0.30	14
10	± 0.50	0.40	16
12	± 1.0	0.40	19
14	± 1.0	0.40	24
16	± 1.0	0.40	31
18	± 1.0	0.40	39
20	± 1.0	0.40	48
25	± 2.0	0.50	78
30	± 2.0	0.50	118
35	± 2.0	0.50	165
40	± 3.0	0.50	195
45	± 3.0	0.50	205
50	± 4.0	0.50	250

\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

#### For this product, please contact:

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# SILIGAINE® 24C1 -60 °C to +350 °C

FIBREGLASS BRAID SLEEVING HIGH TEMPERATURE TREATED AND IMPREGNATED WITH A SILICONE RESIN HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS



#### Standards\*

 IEC 60684-1 and 60684-2. • UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1 (diameters from 0.8 to 25 mm) File no.: E212701.

## **Applications**

· High temperature heating elements (bands, cartridges, etc.). · Domestic electrical heating appliances, cooking appliances.

• All electrothermal machines (ovens, air ovens, etc.).

 Sheathing of cable harnesses for cables subject to high temperature.

#### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us. • Double braid sleeving up to diameter 10 mm: SILIGAINE® 24C2

#### **Packaging**

• Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameters from 5 to 8 mm: 100 m rolls. • Diameters from 9 to 12 mm: 50 m rolls.

• Diameters from 14 to 40 mm: 25 m rolls.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +350 °C.
- Good mechanical strength.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- The total desizing operation (elimination of oils and parasite products) gives SILIGAINE® 24C1 excellent thermal resistance up to +400°C at peak without smoke emission.

#### **Electrical**

• Dielectric strength (dry): 0.8 to 1.2 kV.

#### Standard products

Colour: white.

#### INTERNAL DIAMETER

24C1

Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.20	0.20	1.5
0.8	± 0.20	0.20	2.0
1	± 0.25	0.20	2.4
1.5	± 0.25	0.20	2.9
2	± 0.25	0.20	3.1
2.5	± 0.25	0.20	3.9
3	± 0.25	0.20	6.8
3.5	± 0.30	0.20	7.5
4	± 0.30	0.30	9.0
4.5	± 0.30	0.30	10
5	± 0.30	0.30	12
6	± 0.30	0.30	14
7	± 0.40	0.30	17
8	± 0.40	0.30	20
9	± 0.50	0.30	23
10	± 0.50	0.40	26
12	± 1.0	0.40	32
14	± 1.0	0.40	38
16	± 1.0	0.40	46
18	± 1.0	0.40	55
20	± 1.0	0.40	60
22	± 1.5	0.40	75
25	± 2.0	0.50	86
30	± 2.0	0.50	105
35	± 2.0	0.50	135
40	± 3.0	0.50	150

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

BRAIDED INSULATING SLEEVINGS

# **SILIGAINE® 31-1** -60 °C to +450 °C

HIGH TEMPERATURE TREATED NOT IMPREGNATED

HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS





#### Standards\*

- IEC 60684-1 and 60684-2. • IEC 60684-3-300. • UL approval, category UZIQ2:
- meets the requirements of the flame retardant test VW-1 (diameters from 0.8 to 25 mm) File no.: E212701.

## **Applications**

- · High temperature heating elements (bands, cartridges, etc.). Domestic electrical heating appliances, cooking appliances.
- All electrothermal machines (ovens, air ovens, etc.).
- Sheathing of cable harnesses for cables subject to high temperature.

#### **Options**

• Other diameters: contact us. • Double braid sleeving: SILIGAINE® 31-2.

#### **Packaging**

- Diameters from 0.5 to 4.5 mm: 200 m spools. • Diameters from 5 to 22 mm: 100 m spools. • Diameters from 25 to 40 mm: 50 m spools.
  - Diameters from 45 to 50 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +450 °C.
- Good resistance to common chemical environments.
- Non-combustible meets the requirements of test VW-1 as per standard UL 1441.
- Frays slightly when cut.

#### Standard products

Colour: silvery grey (natural).

#### INTERNAL DIAMETER

2	-	
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Nominal value** (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	0.20	1.5
0.8	0.20	1.8
1	0.20	2.2
1.5	0.20	2.6
2	0.20	4.3
2.5	0.20	5.2
3	0.20	6.0
3.5	0.20	8.4
4	0.30	8.4
4.5	0.30	9.6
5	0.30	10
6	0.30	14
7	0.30	16
8	0.30	18
9	0.30	17
10	0.40	22
12	0.40	26
14	0.40	32
16	0.40	40
18	0.40	52
20	0.40	40
22	0.40	60
25	0.50	76
30	0.50	90
35	0.50	100
40	0.50	105
45	0.50	110
50	0.50	125

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter

# SILIGAINE® 31C1E Expandable -60 °C to +350 °C

EXPANDABLE FIBREGLASS SLEEVING, HIGH TEMPERATURE TREATED IMPREGNATED WITH A SILICONE RESIN



#### HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS



#### Standards\*

 IEC 60684-1 and 60684-2. UL approval, category UZIQ2: meets the requirements of the flame retardant test VW-1 File no.: E212701.

## **Applications**

- High temperature heating elements (bands, cartridges, etc.). · Domestic electrical heating appliances, cooking appliances.
  - All electrothermal machines (ovens, air ovens, etc.).
- Sheathing of cable harnesses for cables subject to high temperature.

## **Options**

• Other diameters: contact us. • Sleevings cut to length: contact us.

## **Packaging**

- Diameters from 0.5 to 4.5 mm: 200 m rolls. • Diameters from 5 to 9 mm: 100 m rolls.
  - Diameters from 10 to 12 mm: 50 m rolls.
  - Diameters from 14 to 20 mm: 25 m rolls.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +350 °C.
- Expandable.
- Very good flexibility.
- Good resistance to common chemical environments.
- Self-extinguishing meets the requirements of test VW-1 as per standard UL 1441.
- Expandable sleeving, so that a single item can be used for a large range of diameters.

#### **Standard products**

Colour: silvery grey (natural).

#### INTERNAL DIAMETER\*\*

#### 31C1-E

Nominal value (mm)	Minimum diameter (mm)	Maximum diameter (mm)	Approxime wall thickn (mm)	
0.5	0.5	1.5	0.20	2.6
Ī	T	2.5	0.20	3.0
1.5	1.5	3	0.20	3.4
2	2	4	0.20	4.5
3	3	6	0.20	6.6
4	4	9	0.30	8.8
5	5	11	0.30	12.0
6	6	13	0.30	14.9
7	7	15	0.30	17.6
8	8	16	0.30	19.9
10	10	19	0.40	23.5
12	12	22	0.40	29.4
14	14	25	0.40	32.0
16	16	28	0.40	49.0
18	18	30	0.40	55.0
20	20	35	0.40	65.0

\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

As these sleevings are expandable, the internal diameters indicated correspond to a recommended operating range

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BRAIDED INSULATING SLEEVINGS

# SILIGAINE® GT 1 -60 °C to +300 °C

TREATED FIBREGLASS BRAIDED SLEEVING NOT IMPREGNATED HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS



#### Standards\*

IEC 60684-1 and 60684-2.

#### **Applications**

- Cabling for heating elements.
   Sheathing of cable harnesses for cables subject to high temperature and mechanical constraints.
  - Industrial electrothermal machines (ovens, air ovens, etc.).

#### **Options**

• Other diameters: contact us. Sleevings cut to length: contact us. • Double braid: SILIGAINE® GT 2: dielectric strength > 1.5 kV. • Triple braid: SILIGAINE® GT 3:

dielectric strength > 2.0 kV.

- **Packaging**
- Diameters from 0.5 to 10 mm: 100 m rolls. • Diameters > 10 mm: contact us.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +300 °C.
- Peak temperatures (few minutes): +350 °C.
- Good resistance to thermal shock.
- · Very good ageing in hot environment.
- Good resistance to atmospheric agents. UV, ozone, oxygen.
- Good resistance to common chemical agents.

#### **Electrical**

• Dielectric strength (dry): > 800 V.

#### **Standard products**

Colour: mottled brown.

#### INTERNAL DIAMETER

#### GT 1

Nominal value** (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	0.40	2.9
1	0.40	3.4
1.5	0.40	4.2
2	0.40	4.8
2.5	0.40	6.0
3	0.40	6.5
3.5	0.40	7.6
4	0.40	9.3
4.5	0.40	10.4
5	0.40	10.6
6	0.40	12.1
7	0.50	13.6
8	0.50	14.9
9	0.50	17.9
10	0.50	17.9
12	0.60	21.3
14	0.60	25.3
16	0.60	30.2
18	0.60	36.7
20	0.60	47.1
22	0.80	49.1
25	1.0	94.5
30	1.0	108
35	1.0	102
40	1.2	172
50	1.2	190
60	1.2	230

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.
\*\*Tolerance: ± 10%.

# SILIGAINE® GTE 1 -60 °C to +250 °C

FIBREGLASS BRAIDED SLEEVING, TREATED AND COATED WITH CLEAR SILICONE VARNISH HIGH TEMPERATURE FIBREGLASS PROTECTIVE SLEEVINGS



#### Standards\*

IEC 60684-1 and 60684-2.

#### **Applications**

- Cabling for heating elements. Sheathing of cable harnesses for cables subject to high temperature and mechanical constraints.
  - Industrial electrothermal machines (ovens, air ovens, etc.).

#### **Options**

- Other diameters: contact us.
- Sleevings cut to length: contact us.
- Double braid: SILIGAINE® GTE 2: dielectric strength > 2 kV.

## **Packaging**

· Packaging upon request: contact us.

#### **Characteristics** General

- Continuous operating temperature: -60 °C to +250 °C.
- Peak temperatures (few minutes): +350 °C.
- Good resistance to thermal shock.
- · Very good ageing in hot environment.
- Good resistance to atmospheric agents. UV, ozone, oxygen.
- Good resistance to common chemical agents.

#### **Electrical**

• Dielectric strength (dry): > 1.5 kV.

#### **Standard products**

Colour: mottled brown.

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Nominal value** (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
1	0.50	4.8
1.5	0.50	5.3
2	0.50	6.9
2.5	0.50	7.7
3	0.50	9.1
4	0.50	10.4
5	0.50	13.1
6	0.50	14.5
7	0.50	15.9
8	0.50	21.3
9	0.50	24.0
10	0.60	28.7
12	0.60	37.5
14	0.60	41.7
16	0.60	51.9
18	0.70	55.7
20	0.70	78.0
22	0.70	85.5
25	1.0	91.1
30	1.0	172
35	1.0	213
40	1.2	333
45	1.2	376
50	1.2	447

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us. 
\*\*Tolerance: ± 10%.



FT No.	PRODUCT REFERENCE	PAGE
9501	SILIGAINE 33SI	34
9502	SILIGAINE GSIL	35
9503	SILIGAINE 33NX	36

# **SILIGAINE® 33SI** +900 °C

SILICA FIBRE BRAIDED SLEEVING NOT TREATED, NOT IMPREGNATED



#### Standards\*

IEC 60684-1 and 60684-2.

#### **Applications**

- Protection of wiring harnesses or ducting subject to very high temperature. Industrial furnaces and air ovens.
  - Nuclear.

#### **Options**

- Other diameters: contact us.
- Diameters > 20 mm: see SILIGAINE® GSIL.

#### **Packaging**

- Diameters from 0.5 to 4 mm: 200 m spools.
- Diameters from 5 to 20 mm: 100 m spools.

#### **Characteristics General**

- Continuous operating temperature: +900 °C.
- Peaks at: +1050 °C
- Excellent thermal resistance.
- Excellent resistance to radiations.
- · Low thermal expansion coefficient.
- High chemical resistance, especially to acids.
- Non-combustible.
- Good flexibility.
- Frays slightly when cut.

- Silicon dioxide: > 94 %.
- Product quaranteed asbestos free.

#### **Standard products**

Colour: white (natural).

INTERNAL DIAMETER	3351		
Nominal value** (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)	
0.5	0.20	4.7	
1	0.20	5.6	
1.5	0.20	6.3	
2	0.20	7.8	
3	0.20	9.6	
4	0.30	15	
5	0.30	20	
6	0.30	24	
7	0.30	27	
8	0.30	30	
10	0.40	36	
12	0.40	48	
14	0.40	66	
16	0.40	80	
18	0.40	88	
20	0.40	94	

#### For this product, please contact:

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\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter.

# SILIGAINE® GSIL +1050 °C

ULTRA PURE SILICA FIBRE BRAIDED SLEEVING, NOT TREATED, NOT IMPREGNATED



#### Standards\*

IEC 60684-1 and 60684-2.

#### **Applications**

- Sheathing of transport rolls in annealing ovens for special glasses. Does not affect the surface finishing of transported glass panes.
  - Protection of wiring harnesses or ducting at very high temperature.
    - Industrial furnaces and air ovens. Nuclear.

#### **Options**

• Other diameters: contact us.

#### **Packaging**

Boxes of 100 m.

#### **Characteristics** General

- Continuous operating temperature: +1050 °C.
- Peaks at: +1200 °C.
- Excellent thermal resistance.
- Excellent resistance to radiations.
- · Low thermal expansion coefficient.
- High chemical resistance, especially to acids.
- Non-combustible.
- Good flexibility.
- · Low density.
- Good resistance to atmospheric agents. UV, ozone, oxygen.
- · Frays slightly when cut.

#### Chemical

- Silicon dioxide: > 99.9 %.
- Product guaranteed asbestos free.

#### Standard products

Colour: white (natural).

#### INTERNAL DIAMETER GSIL Nominal value\*\* **Approximate** Approximate (mm) wall thickness linear weight (mm) (kg/km) 0.40 2.8 0.40 2 5.2 0.40 5.6 4 0.40 7.5 5 0.40 8.4 0.40 12 6 0.50 13 8 0.50 15 10 0.60 26 12 0.60 22 14 25 0.60 16 0.60 34 0.60 18 38 20 0.60 42 25 0.60 43 30 0.80 52 40 0.80 67 45 0.80 73 50 1.0 81 60 93 1.0 75 1.0 176 83 1.0 195

#### For this product, please contact:

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter

# **SILIGAINE® 33NX** +1200 °C

BOROSILICOALUMINATE FIBRE BRAIDED SLEEVING NOT TREATED, NOT IMPREGNATED



#### Standards\*

IEC 60684-1 and 60684-2.

#### **Applications**

• Sheathing of transport rolls in annealing ovens for special glasses. Does not affect the surface finishing of transported glass panes.

- Protection of wiring harnesses or ducting at very high temperature.
  - Industrial furnaces and air ovens. Nuclear.

#### **Options**

• Other diameters: contact us.

#### **Packaging**

- Diameters from 0.5 to 4 mm: 200 m spools. • Diameters from 5 to 20 mm: 100 m spools.
- Diameters from 25 to 40 mm: 50 m spools.
  - Diameters > 45 mm: 25 m spools.

#### **Characteristics** General

- Continuous operating temperature: +1200 °C.
- Peaks at: +1400 °C.
- Excellent thermal resistance.
- Very good mechanical strength at high temperature.
- Excellent resistance to radiations.
- · Low thermal expansion coefficient.
- Non-combustible.
- · Good flexibility.
- · Frays slightly when cut.

#### Chemical

Product guaranteed asbestos free.

#### Standard products

Colour: white (natural).

#### INTERNAL DIAMETER

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Nominal value** (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	0.20	4.7
1	0.20	5.6
1.5	0.20	6.3
2	0.20	7.8
3	0.20	9.6
4	0.30	15
5	0.30	20
6	0.30	24
7	0.30	27
8	0.30	30
10	0.40	36
12	0.40	48
14	0.40	66
16	0.40	80
18	0.40	88
20	0.40	94
30	0.50	104
40	0.50	110
50	0.50	115
60	0.50	170
70	0.70	215
80	0.70	250

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter

## **OTHER PROTECTIVE SLEEVINGS**

FT No.	PRODUCT REFERENCE	PAGE
9601	SILIGAINE 22P1	38
9602	SILIGAINE TN	39
9603	SILIGAINE TN-FR	40
9604	SILIGAINE TN-FR TWIST	41

### OTHER PROTECTIVE SLEEVINGS

# SILIGAINE® 22P1 +130°C Class B

POLYESTER THREAD BRAIDED SLEEVING SLIGHTLY IMPREGNATED

### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 part 320.

### **Applications**

· Internal cabling for hermetically sealed units. Internal cabling for rotating machines class B. Sheathing of cable harnesses (automobile, electronics, lighting, etc.).

### **Options**

• Other diameters: contact us. • Other colours: contact us. • Sleevings cut to length: contact us.

• Sleeving not impregnated: SILIĞAINE® 32P1.

### **Packaging**

- Diameters from 0.5 to 4 mm: 200 m rolls. • Diameters from 5 to 9 mm: 100 m rolls. • Diameters from 10 to 12 mm: 50 m rolls.
- Diameters from 14 to 25 mm; 25 m rolls. • Other packaging: contact us.

### **Characteristics General**

- Temperature in continuous working: up to +130°C.
- Good resistance to freon gas.
- Good resistance to oils, alcohols and solvents.
- · Compatible with most impregnation varnishes.
- Excellent mechanical strength.

### **Electrical**

• Dielectric strength (dry): 0.8 to 1.2 kV.

### Standard products

Colour: white.

INTERNAL DI	AMETER
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Nominal value (mm)	Tolerance (mm)	Approximate wall thickness (mm)	Approximate linear weight (kg/km)
0.5	± 0.25	0.30	1.4
0.8	± 0.25	0.30	1.7
1	± 0.25	0.30	1.8
1.5	± 0.25	0.30	2.0
2	± 0.25	0.30	2.6
2.5	± 0.25	0.30	3.0
3	± 0.50	0.30	3.5
4	± 0.50	0.30	4.2
5	± 0.50	0.50	8.0
6	± 0.50	0.50	10
7	± 0.50	0.50	12
8	± 0.50	0.50	15
9	± 0.50	0.50	18
10	± 0.50	0.50	20
12	± 1.0	0.70	24
14	± 1.0	0.70	30
16	± 1.0	0.70	34
18	± 1.0	0.70	41
20	± 1.0	0.90	47
25	± 1.0	0.90	66

\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

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# **SILIGAINE® TN** -50°C to +150°C

BRAIDED EXPANDABLE SLEEVING IN SINGLE-FILAMENT POLYESTER

### OTHER PROTECTIVE SLEEVINGS



### Standards\*

 IEC 60684-1 and 60684-2. • IEC 60684-3 parts 340 to 342.

### **Applications**

• Sheathing of electric cable harnesses Protection of assemblies subject to severe mechanical constraints (abrasion, cutting, alternate bendings, doorways, etc.) .

### **Options**

• Sleevings cut to length: contact us. Grey braid: SILIGAINE® TG.
 Braid in Rilsan® single-filament braid for improved resistance to abrasion (wire of diameter 0.30 mm): SILIGAINE® RN or SILIGAINE® RG. • Braid resistant to vertical flame (UL 1441-VW-1) in special single-filament polyester: SILIGAINE® TN-FR.

### **Packaging**

• Diameters from 3 to 10 mm: 100 m rolls. • Diameters from 12 to 30 mm: 50 m rolls. • Diameters from 40 to 50 mm; 25 m rolls.



### For this product, please contact:

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### **Characteristics** General

- Continuous operating temperature: 50 °C to +150 °C.
- Peaks at +220°C.
- Good resistance to oils and common chemical environments.
- · Excellent resistance to humidity and mould.
- Excellent resistance to abrasion.
- Expandable sleeving for easy threading and wide range of overlapping diameters.

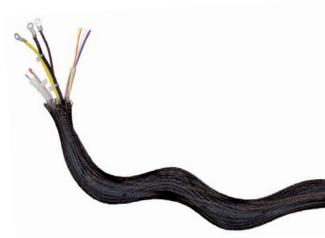
### Standard products

Colour: black.

Part number	Nominal internal diameter** (mm)	Minimum internal diameter** (mm)	Maximum internal diameter** (mm)	Approximative linear weight (kg/km)
P0901004	3	1	6	3.6
P0901010	4	2	7	4.2
P0901005	5	3	9	5
P0901007	6	4	11	5.8
P0901002	8	5	13	7
P0901003	10	6	17	8.4
P0901009	12	8	21	11.5
P0901006	15	10	24	11.4
P0901011	20	13	28	14
P0901008	25	14	36	13.8
P0901012	30	17	43	26
P0901013	40	25	60	29
P0901001	50	35	75	36

\*Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter.
Rilsan® is an Arkema registered trademark.



### BRAIDED INSULATING SLEEVINGS

**SILIGAINE®** TN FR

-50°C to +150°C

FIREPROOF BRAIDED EXPANDABLE SLEEVING IN SINGLE-FILAMENT POLYESTER

### OTHER PROTECTIVE SLEEVINGS



### Standards\*

• Classification R22: HL3, R23: HL3, according to EN 45545-2 • UL 1441

### **Applications**

- Protection of assemblies subject to severe mechanical constraints (abrasion, cutting, alternate bendings, doorways, etc.).
  - Railway and electronic industries.

### **Packaging**

- Diameters from 3 to 8 mm: 100 m spools.
- Diameters from 10 to 50 mm: 50 m spools.

### **Characteristics** General

- Continuous operating temperature: -50°C to +150°C
- Peaks at +175°C.
- Expandable sleeve
- Flame resistant
- Excellent resistance to abrasion
- Excellent cutting resistance
- Excellent resistance to humidity and mould
- Light weight
- Halogen-free

### Recommendations

Hot cutting to lenght means there is no fraying to the ends.

### **Standard products**

Colour: black with white tracer.

Part number	Nominal internal diameter** (mm)	Minimum internal diameter** (mm)	Maximum internal diameter** (mm)	Approximative linear weight (kg/km)
P0903004	3	2	5	3.6
P0903002	4	3	7	4.3
P0903005	5	4	9	4.9
P0903006	6	5	11	5.8
P0903007	8	7	13	7.2
P0903008	10	9	15	8.7
P0903009	12	11	17	10.3
P0903001	15	13	20	11.3
P0903010	20	18	25	13.1
P0903011	25	22	30	18.0
P0903012	30	27	40	21.8
P0903013	40	35	50	29.5
P0903014	50	45	60	36.1

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal diameter.

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### BRAIDED INSULATING SLEEVINGS

# **SILIGAINE®** TN FR TWIST -50°C to +150°C

FIREPROOF BRAIDED EXPANDABLE SELF WRAPPING SLEEVING IN SINGLE-FILAMENT POLYESTER

### OTHER PROTECTIVE SLEEVINGS



### Standards\*

• Classification R22: HL3, R23: HL3, according to EN 45545-2 • UL 1441

### **Applications**

- Protection of assemblies subject to severe mechanical constraints (abrasion, cutting, alternate bendings, doorways, etc.).
- Railway, marine and electronic industries.

### **Options**

• For diameters over 50 mm, please contact us.

### **Packaging**

- Diameter of 5 mm: 150 m spools.
- Diameter of 8 mm: 100 m spools.
- Diameters from 13 to 16 mm: 50 m spools.
- Diameters from 19 to 25 mm: 25 m spools.
- Diameters from 29 to 50 mm: 15 m spools.

### **Characteristics** General

- Continuous operating temperature: -50°C to +150°C
- Self wrapping (Quick and easy installation for assembly or maintenance)
- Flame resistant
- Excellent resistance to abrasion
- Light weight
- Halogen-free

### Recommendations

SILIGAINE® TN FR TWIST should be tied at intervals if continuous working temperature exceeds +110°C.

### Standard products

Colour: black with white tracer.

Part number	Nominal internal diameter** (mm)	Minimum internal diameter** (mm)	Maximum internal diameter** (mm)	Approximative linear weight (kg/km)
P0906001	5	4	5	10
P0906002	8	5	8	13
P0906003	13	10	9	21
P0906004	16	13	16	25
P0906005	19	16	19	29
P0906006	25	19	25	42
P0906007	29	25	29	44
P0906008	32	29	32	48
P0906009	38	32	38	58
P0906010	50	38	50	93

<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us
\*\*The extra flexibility of this type of sleeving negates any need to show tolerances on the internal dir

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### www.omerin.com



# SPECIAL SLEEVINGS AND OVEN SEALS

FT No.	PRODUCT REFERENCE	PAGE
9702	SILITUBE X	44
9703	VEROX	45

SPECIAL SLEEVINGS AND OVEN SEALS

# SILITUBE® X Fireproof sleeving

MINERAL FIBRE BRAIDED SLEEVING COATED WITH SILICONE RUBBER. WATERTIGHT AND FIREPROOF

SILITUBE X



### Standards\*

- Inspired by American aeronautical standards SAE.AS1055 and AS1072.
  - IEC 60695-2-10 and IEC 60695-2-11. NF EN 45545-2.

### **Applications**

- Protection and insulation of electric wiring harnesses, water, gas, compressed air or hydraulic fluid pipes, against aggression (presence of flames, projections of melting metals or glass, very high episodic temperatures, steam projections, etc.) in such industries as: > Steel industry, foundry, steelworks, glassworks.
  - > Chemicals, petrochemical industry.
  - Shipbuilding, railway construction.
  - Aeronautical construction, space industry. > All aggressive environments.
    - **Options**

• Customised lengths: contact us.

### **Packaging**

· Packaging upon request: contact us.

### **Characteristics General**

Continuous operating temperature: -60 °C to +260 °C.

Peaks: 30 min at 800 °C. 15 min at 1100 °C. 1 min at 1500 °C.

- Classification R22-R23 HL1, HL2 and HL3 as per EN 45545-2.
- The thick braid ensures thermal protection.
- The silicone coating ensures episodic resistance to flames and watertightness.
- Excellent flexibility at low temperature: SILITUBE® X does not harden, does not chip off, does not soften.
- Slight swelling when hydrocarbons are present.
- Very good flexibility.

### Chemical

- · Halogen-free.
- Product guaranteed asbestos free.

### Standard products

Colour : brick red.

### **INTERNAL DIAMETER\*\***

ST	П	T	u	R	F١	®	X
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SILITUBE® X reference	Nominal value (mm)	Nominal value inch	Nominal wall thickness (mm)	Approximate linear weight (kg/km)
Х 8	8	5/16"	4	120
X 10	10	3/8"	4	140
X 13	13	1/2"	4	200
X 16	16	5/8"	4	220
X 19	19	3/4"	4	340
X 22	22	7/8"	4	360
X 25	25	] "	4	380
X 32	32	1″ 1/4	4	480
X 38	38	1" 1/2	4	680
X 45	45	1″ 3/4	4	720
X 51	51	2"	4	750
X 57	57	2" 1/4	4	1 020
X 64	64	2" 1/2	4	1 280
X 76	76	3″	4	1 700
X 89	89	3" 1/2	4	1 800
X 102	102	4"	4	1 950

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<sup>\*</sup>Standards: our products comply with all or part of the requirements of standards quoted; contact us.

\*\* The flexibility and extra wall thickness of the SILITUBE® X negates the need to indicate tolerances on the internal diameter.

### SPECIAL SLEEVINGS AND OVEN SEALS

# **VEROX**®

### **Characteristics**

- Non-combustible.
- Non hygroscopic.
- No apparent ageing.
- Resistant to oils, alcohols and solvents.
  - Electric insulations.
  - No environmental hazard.

### -20 °C to +500 °C

**Special Pyrolysis** 

Wide range of fascia joints.

**GPAD** TM-FDV-C



Wide range of interglass fibreglass seals.

### JHIV1 JHIV2



### -100 °C to +1050 °C

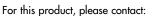
Wide range of fascia joints.

**TM-FDV** JHIV B • JPLAT



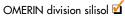
### **Clipping systems**

Innovative clipping systems adapting to your oven.



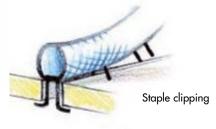
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Notes	









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