

SMISOL Clim AeternaTM

INNOVATION AND
SUSTAINABILITY IN
THE ACR SECTOR

Serravalle Copper Tubes
COPPER DIVISION
[EN]



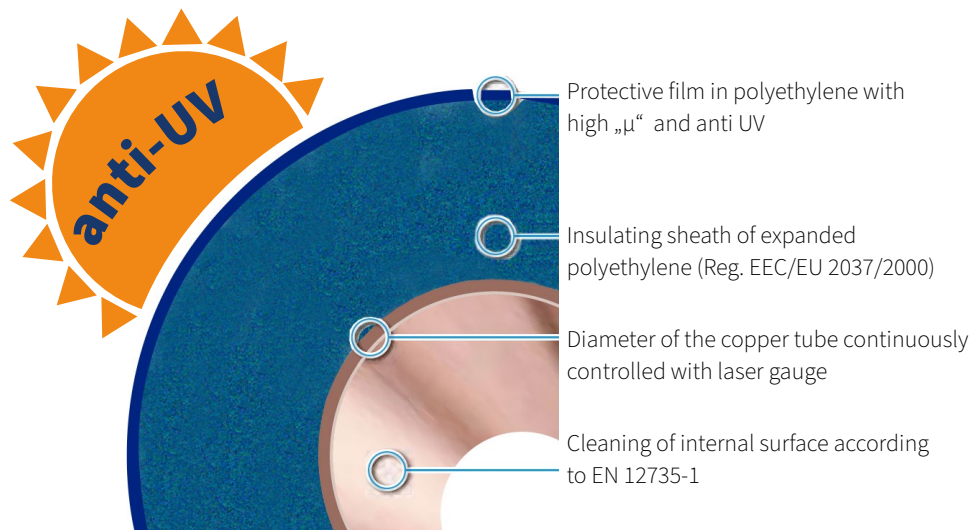
SMISOL Clim Aeterna™

INNOVATION AND
SUSTAINABILITY IN ACR

TABLE OF STANDARD PRODUCTION DIMENSIONS – TUBES IN COILS

Dimensions De x Sp		Guaranteed minimum roll length m	Minimum coating thickness mm	Burst pressure MPa	Working pressure ASTM MPa	Water content l/m
mm	inches					
6,35 x 0,80	1/4"	50	6	56,54	14,14	0,018
6,35 x 1,00	1/4"	50	6	70,68	17,67	0,015
9,52 x 0,80	3/8"	50	8	37,71	9,43	0,049
9,52 x 1,00	3/8"	50	8	47,14	11,79	0,044
12,70 x 0,80	1/2"	50	10	28,27	7,07	0,097
12,70 x 1,00	1/2"	50	10	35,34	8,83	0,090
15,87 x 1,00	5/8"	25	10	28,28	7,07	0,151
19,05 x 1,00	3/4"	25	10	23,56	5,89	0,228
22,22 x 1,00	7/8"	25	10	20,20	5,05	0,321

De = outer diameter Sp = thickness



FIELDS OF USE:

- Conditioning
- Transport of refrigerant gases (R290, R32, ...)

SMISOL Clim Aeterna™ represents a significant step forward in the field of air conditioning systems.

This copper tube, produced in accordance with EN 12735-1, is distinguished by its insulating coating of polyethylene foam with closed cells of regular size and evenly distributed according to EN 14114. Designed for optimum performance, the insulating sheath is manufactured in accordance with the European Regulation EEC/EU 2037/2000.

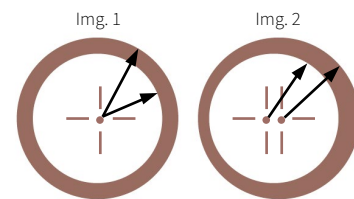
This legislation requires the use of expanded sheaths free of CFCs and HCFCs, chemicals recognised as harmful to health and the environment. The thickness of the sheath is carefully dimensioned to meet the different requirements in the field of implants, ensuring both safety and high performance.

SMISOL Clim Aeterna™ is not only a high performance product, but also aligns to current environmental sustainability standards. Its characteristics are designed to promote recycling, energy saving and circularity, aspects increasingly in demand in the construction and plant sector. Thanks to the product life cycle environmental statements, users can have a clear awareness of the environmental impact of the product they are going to install.

SMISOL Clim Aeterna™ offers numerous competitive advantages. Its compliance with industry requirements facilitates participation in public tenders, ensuring that products comply with building materials regulations. In addition, the focus on sustainability and environmental communication is an important added value, contributing to an overall reduction of environmental impact.

ECCENTRICITY:

A low eccentricity ensures a regular thickness along the entire circumference of the tube. It is a fundamental parameter for the end marking or flaring operation, in addition to greater safety of coupling with fittings.



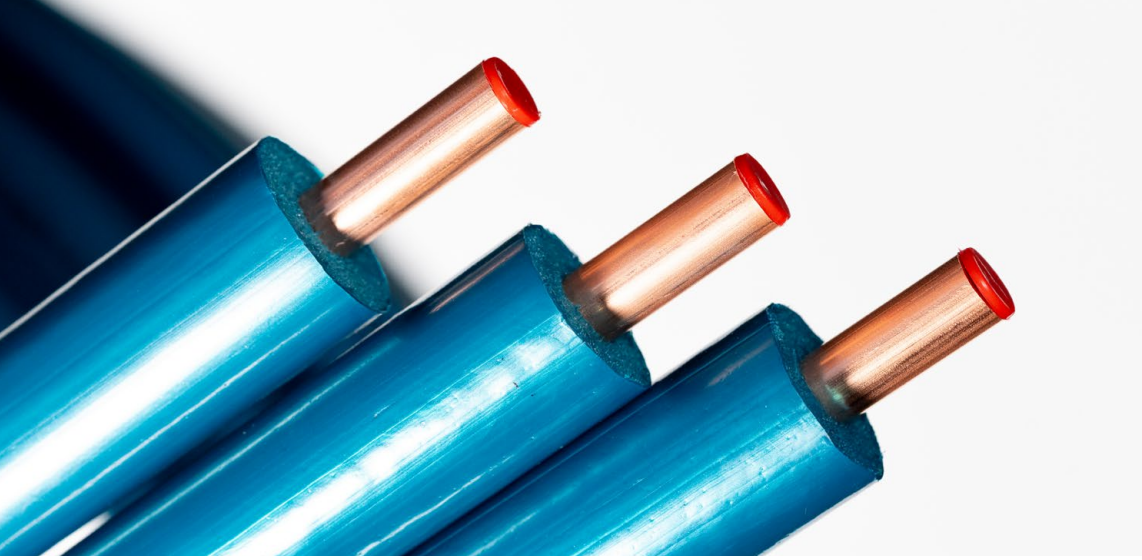
INTERNAL CLEANING:

The internal cleaning of copper pipes is a crucial aspect to ensure the efficiency and safety of any installation. A high level of cleanliness in the sewer not only prevents the accumulation of contaminants and deposits, but also ensures proper operation of the plant.

CIRCULAR INSULATING SHEATHING:

The circular insulation sheath has been designed to fit perfectly into the surface of the copper pipe. This conformation ensures a greater contact area between the insulation and the pipe, reducing the risk of gaps that could compromise the effectiveness of the insulation. A good adhesion is crucial to prevent heat loss, condensation formation and improve the overall efficiency of the anti-UV system.





COATING CHARACTERISTICS:

- Thermal conductivity: λ 0.038 W/m°C at 40°C
- Value of the water vapour diffusion resistance factor "μ" > 40,000
- Fire behaviour: BLS1d0 (EN 13501-1)
- Increased resistance to UV rays
- Average coating density: 30 kg/m³
- Free from ammonia residues
- Excellent resistance to external chemical agents
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000)
- Halogen-free flame retardant

Closed-cell expanded polyethylene coating with an average water vapour resistance factor „μ“ of more than 40,000 is an advanced solution for thermal insulation and protection of buildings and infrastructure. Insulating sheaths such as **SMISOL Clim Aeterna™** are designed taking into account European regulations, in particular the EEC/EU Regulation 2037/2000, which prohibits the use of CFCs and HCFCs, substances harmful to both human health and the environment.

SMISOL Clim Aeterna™ not only complies with environmental regulations, but also demonstrates high fire behaviour, classified as BLS1d0 according to EN 13501-1. These properties make the product suitable for use in contexts where safety is a top priority. The outer polyethylene film is designed to counteract the crystallization process of polyethylene, a problem that can compromise the integrity of the material over time.

RESISTANCE TO SUNLIGHT

Tests performed according to the ASTM G-155 standard, which simulates accelerated aging conditions, confirm that **SMISOL Clim Aeterna™** is particularly suitable for areas with strong annual solar radiation.

REACTION TO FIRE

European classification EN 13501-1

MAIN CLASSIFICATION		
A1	+++++	non-combustible materials (glass and glass fibre, metals, porcelain, etc.)
A2		
B	++++	non flammable combustible materials
C	+++	combustible materials not easily flammable
D	++	
E	+	
F	-	easily flammable materials

ANCILLARY CLASSIFICATION			
s	1	++ (the best)	s = smoke: smoke production during combustion
	2	+	
	3	- (the worst)	
d	0	++ (the best)	d = dripping: dripping during combustion
	1	+	
	2	- (the worst)	





In an increasingly stringent regulatory environment, the search for products that comply with European standards is becoming essential to ensure safety and energy efficiency.

SMISOL Clim Aeterna™ is an innovative and sustainable solution. Its technical characteristics, adherence to environmental regulations and high-level fire behaviour make it an excellent product for residential and commercial applications. With proven performance against aging and solar radiation, **SMISOL Clim Aeterna™** is a safe and responsible choice in the field of conditioning.

EPD DECLARATION

Environmental sustainability is taking on an increasingly central role in today's landscape, influencing the decisions of companies, consumers and designers. In this context, the **EPD (Environmental Product Declaration)** is essential for several reasons.

SMISOL Clim Aeterna™ has the EPD certification, this offers objective and verified information on the environmental impacts of a product throughout its entire life cycle, from production to disposal.

This data is essential to understand how a product interacts with the environment and to make informed purchasing and design decisions. The adoption of international standards such as ISO 14025 ensures that information is comparable and reliable, making it easier to choose more sustainable solutions. In particular, in the construction sector, a product with EPD is often preferred in public and private procurement. Tenders increasingly require minimum environmental criteria (MCA), and the possession of an EPD can represent a significant competitive advantage. In addition, to obtain prestigious certifications such as LEED, BREEAM or WELL, the availability of an EPD declaration becomes an essential requirement.

No less important is the fact that in many countries EPD is necessary to comply with environmental regulations, as well as to access incentives and tax relief. This legal and financial dimension makes the EPD not only a technical document, but also a competitive advantage in improving the quality of services offered to the final consumer.

EPD-IES-0025027 certificate is available at <https://www.environdec.com/library/epd25027>



Furter information

WWW.SCTUBES.COM

Contacts:

Serravalle Copper Tubes S.r.l.

Via Cassano, 113 15069 Serravalle Scrivia (AL) ITALY

info-plumbing@sctubes.com www.sctubes.com www.kme.com/sctubes

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