

SMISOL[®] Clim Platinum

The climate specialist

SCTubes
SERRAVALLE COPPER TUBES
Tréfinmétaux Group

**ANTI
UV**



**Reaction to fire
classification
BL s1 d0**



SMISOL® Clim Platinum

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APPLICATION

- Air conditioning.
 - Refrigerant gas transportation. (R32, R410 A, R407, ...).
- In compliance with applicable regulations.*

This copper tube is manufactured according to EN 12735-1 and is pre-insulated in closed cell expanded polyethylene where the cells are of regular size and evenly distributed (compliant to EN 14114). It is distributed in coils. The copper tube diameter is expressed in inches, as required by standard EN 12735-1. The insulation sheath is manufactured in full compliance with European Regulation EEC/EU 2037/2000 that enforces the use of insulating expanded foam sheaths devoid of CFCs and HCFCs which are harmful to health and the environment. The thickness of the sheath is designed to satisfy the various requirements of this application area. Given the particular application field, special attention is reserved for the external protective polyethylene film designed to prevent the formation of condensation on the outer wall of the product.

SMISOL®Clim Platinum is also characterised by an extremely low eccentricity values, a very important feature for flaring operations. It conforms to the technical characteristics required by the European standard regarding air conditioning and carrying of the new cooling fluids (R32, R410 A, R407, ...).



TABLE OF STANDARD PRODUCT DIMENSIONS - COILS

dimensions Ed x Th		coil length min. guaranteed	min. sheath thickness	burst pressure	operating pressure ASTM	water content
(mm)	(inches)	(m)	(mm)	(MPa)	(MPa)	(L/m)
6.35 x 0.8	1/4"	50	6	56.54	14.14	0.018
6.35 x 1	1/4"	50	6	70.68	17.67	0.015
9.52 x 0.8	3/8"	50	8	37.71	9.43	0.049
9.52 x 1	3/8"	50	8	47.14	11.79	0.044
12.70 x 0,8	1/2"	50	10	28.27	7.07	0.097
12.70 x 1	1/2"	50	10	35.34	8.83	0.090
15.87 x 1	5/8"	25	10	28.28	7.07	0.151
19.05 x 1	3/4"	25	10	23.56	5.89	0.228
22.22 x 1	7/8"	25	10	20.20	5.05	0.321

Ed = External diameter Th = wall thickness

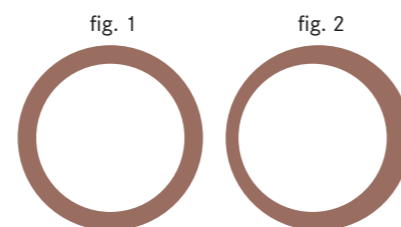
SMISOL Clim Platinum is suitable for the transport of R32 refrigerant gas

INTERNAL PROTECTION

The inner surface of the copper tube is bright, clean and dry, essential characteristics of this product category normally available on the market for industrial use. This particularity allows for the achievement of an integrated system with the terminal elements of the plant. The particular internal factory cleanliness of SMISOL®Clim Platinum material is safeguarded by fitting terminal sealing stoppers at production.

ECCENTRICITY

Eccentricity defines the distance between the centre of the outer circumference and that of the inner circumference and it is a fundamental parameter for flaring operations. Eccentricity is zero when the two centres coincide perfectly (fig.1), while in the presence of eccentricity, the greater its value, the more variation is evident in the all thickness (fig.2).

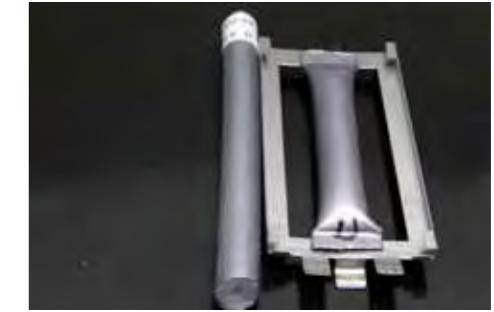


SHEATH CHARACTERISTICS

- Thermal conductivity: $\lambda \leq 0.040 \text{ W/m}^\circ\text{C}$.
- Average value of the water vapour diffusion resistance factor " μ " > 15000.
- Average sheath density: 30 kg/m^3 .
- Free of ammonia residues.
- Excellent resistance to external chemical agents.
- Reaction to fire classification: BLS1d0 (EN 13501-1).
- Free of CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Colouring of the outer film "Silver grey".
- Superior UV resistance.
- Halogen-free flame retardant.

ACCELERATED AGEING TEST

The test is scheduled to last 4000 hours with exposure to a Cl65 Xenon lamp in a weatherometer, in Kly, equivalent to approximately 3 years of continuous exposure in Northern Italy or 2 years in Southern Italy.



Zero hour sample (prior to exposure) and a sample subjected to an accelerated ageing test after 4000 hours of exposure.

EXTERNAL PROTECTION

Polyethylene closed cell expanded foam with average water vapour diffusion resistance factor " μ " greater than 15000.

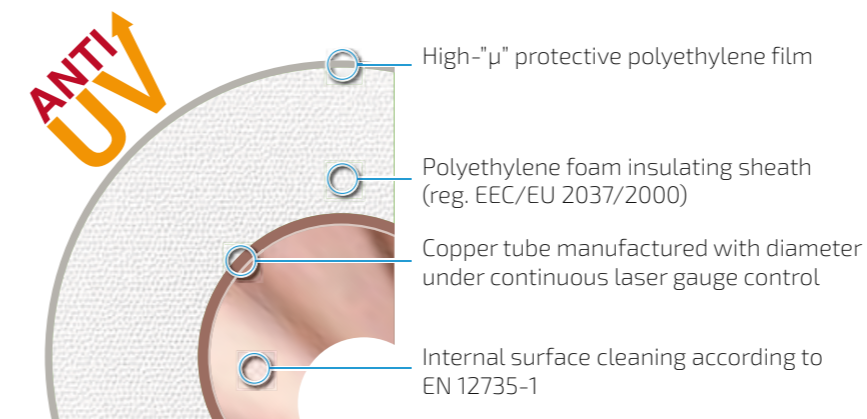
The insulating sheath is manufactured under full compliance to European Regulation EEC/EU 2037/2000 which enforces the use of expanded foam insulation sheaths devoid of CFCs and HCFCs which are harmful to health and the environment.

Reaction to fire classification: BLS1d0 (EN 13501-1).

The outer polyethylene film has a darker pigment than the traditional white to counter the PE crystallisation process. In addition, normal anti-UV additives tend to degrade the flame retardant treatment necessary for the product. In order to avoid this drawback, the SMISOL®Clim Platinum sheath contains an environmentally friendly halogen-free flame retardant that does not counteract the anti-UV action.

Tests conducted according to ASTM G-155 (accelerated ageing) confirm that SMISOL®Clim Platinum is suitable for areas with high annual solar radiation.

At the end of the exposure test, the sample did not show any signs of degradation (see photo).



REACTION TO FIRE CLASSIFICATION

BL s1 d0

Safety regulations are increasingly stringent, continuous updates require careful research of products suitable to meet the characteristics required by technical legislation.

If you are looking for a certified covered tube, compliant with EN 13501-1 (Fire classification of construction products and building elements - Part 1) SMISOL Clim Platinum is the solution to the problem.

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