

SMISOL®Frio

Fears neither heat nor cold

APPLICATIONS

- Refrigeration.
- Transport of heat transfer fluids for multi-function systems.

In compliance with applicable regulations.



This copper tube is manufactured according to EN 12735-1 (and ASTM B 68/M), and is pre-insulated with an expanded polyethylene foam, characterised by a closed cell structure with regular and evenly distributed cell size (EN 14114). It is distributed in coils, with the tube diameter specified in millimetres. The insulating 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 sheath thickness 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.

SHEATH CHARACTERISTICS

- Thermal conductivity: $\lambda \leq 0,038$ W/mK at 40°C.
- Average value of the water vapour diffusion resistance factor " μ " > 15.000.
- Average sheath density: 33 kg/m³.
- Free from ammoniacal residues.
- Excellent resistance to external chemical agents.
- Reaction to fire classification: BLS1d0 (EN 13501-1).
- Devoid of CFCs and HCFCs (Reg. EEC/EU 2037/2000).

INTERNAL SURFACE

The inner surface of the copper tube is bright, clean and dry, essential characteristics of products such this 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 cleanliness of SMISOL®Frio is safeguarded by the closure of each coil ends by means of stoppers directly in the production phase.

EXTERNAL PROTECTION

Polyethylene closed cell expanded foam with average **water vapour diffusion resistance factor " μ " greater than 15.000**. 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).

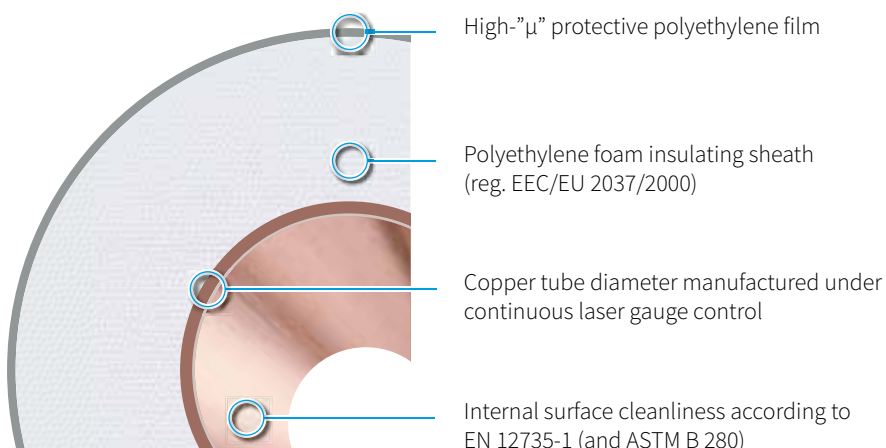


TABLE OF STANDARD PRODUCT DIMENSIONS - COILS

dimensions Ed x Th	coil length min. guaranteed	min. sheath thickness	burst pressure	operating pressure ASTM	water content
(mm)	(m)	(mm)	(MPa)	(MPa)	(l/m)
6 x 1	50	6	74,80	18,70	0,013
8 x 1	50	8	56,10	14,03	0,028
10 x 1	50	8	44,88	11,22	0,050
12 x 1	50	10	37,40	9,35	0,079
14 x 1*	50	10	32,06	8,01	0,113
16 x 1*	50	10	28,05	7,01	0,154
18 x 1	50	10	24,93	6,23	0,201
22 x 1	25	10	20,40	5,10	0,314

Ed = External diameter Th = wall thickness

* Sizes 14x1 and 16x1 mm are manufactured according to ASTM B 68/M

INDICATIONS FOR PLANT DESIGN

To avoid condensation on the tubing, please check the environmental conditions in which the product is to be installed: relative humidity, ambient temperature and temperature of the conveyed fluid. In this regard, it is recommended that the plant parameters are verified by means of the Psychrometric diagram.

