

TEN, a copper tube pre-insulated with low-density closed cell expanded polyethylene, in compliance with **Law 10/91**, former Law 373, regarding the design, installation, running and maintenance of thermal systems for buildings, for the purposes of energy consumption control.

Ideal for water distribution systems, classified in fire resistance Class 1, the coating has been designed in the smallest details to respond excellently to the increasingly more qualified requirements in the design of modern plants.

The protective film is corrugated to provide greater adherence to cement mortars and has an excellent resistance to external agents.

The coating is odourless, non-toxic and is made without the use of CFC. It is suitable to be used in plants with operating temperatures ranging from -30°C to +95°C.

The TEN copper tube is supplied in 50-meter coils (25 meters with Ø 22 mm) marked at intervals also indicating the relative meters.

The core of the TEN is the ESENCOR copper tube, providing excellent protection against corrosion, the result of scientific studies and tests that guarantee a considerably lower level of residual carbon than is required by manufacturing standards.



The copper tube EN 1057 is marked **CE** as required by 89/106/EEC EU Construction Products Directive.

INSULATION DENSITY	: 30 kg/m ³
THICKNESS OF THE INSULATING SHEATH	: from 6 to 9 mm
OPERATING TEMPERATURES	: -30 °C +95 °C
THERMAL CONDUCTIBILITY	: 0.0397 W · m ⁻¹ · K ⁻¹
RESISTANCE TO FIRE	: Class 1 (self-extinguishing)
WRAPPING	: coils individually wrapped with transparent film to give further protection

CHARACTERISTICS OF THE ESENCOR COPPER TUBE

Alloy	Cu-DHP CW024A (Cu = 99.90% min. – P = 0.015 ÷ 0.040%)
Physical state	Annealed
Unit tensile strength	220 MPa/mm ² min.
Percentage elongation	40% min.
Internal cleanliness	C max. 0,20 mg/dm ²
Dimensions and tolerances ¹	in compliance with standard EN 1057
Internal surface roughness	RA 1/10 micron
Linear thermal expansion coefficient	0.00168 mm/m °C
Thermal conductivity at 20 °C	364 W/m k

¹ Products with marking, dimensional tolerances and various lengths can be prepared on specific Customer request.

TEN COPPER TUBE

silmet S.P.A.

TABLE OF DIMENSIONS OF THE SILMET TEN COPPER TUBE

dimensions without insulation mm	diameter with insulation mm	thickness of insulating sheath mm	bursting pressure MPa	operating pressure MPa	coil length m	water content per meter l/m
10 X 1	22	6	44,88	11,22	50	0,0503
12 X 1	24	6	37,40	9,35	50	0,0785
14 X 1	26	6	32,06	8,01	50	0,1131
16 X 1	29	6,5	28,05	7,01	50	0,1539
18 X 1	31	6,5	24,93	6,23	50	0,2011
22 X 1	40	9	20,40	5,10	25	0,3142

PALLETISATION OF SILMET TEN COATED COILS

dimensions Ø x thickness mm	coil length m	coils per pallet n	meters per pallet m	approx. gross pallet weight kg	dimensions of pack cm
10 X 1	50	17	850	222	h 220 X Ø 80
12 X 1	50	16	800	240	h 220 X Ø 80
14 X 1	50	15	750	270	h 220 X Ø 80
16 X 1	50	13	650	265	h 220 X Ø 80
18 X 1	50	13	650	305	h 220 X Ø 90
22 X 1	25	14	350	217	h 220 X Ø 90

The packs cannot be stacked.

A maximum of 2 packs with a large diameter (**h 220 x Ø 90 cm**) and available for other coated products, are loaded onto the pallet side-by-side together with a third smaller pallet.

The others can be loaded side-by-side in threes.

TEN copper tube is suitable for the following fields of use and with the following references:

Heating

Law 9 January 1991 n. 10

Rules for the implementation of national energy plan in the field of rational energy use, saving energy and developing renewable sources of energy.

DPR August 26, 1993 n. 412

Regulation laying down rules for the design, installation, operation and maintenance of thermal systems of buildings in order to control energy consumption, implementing art. 4, paragraph 4, of the Law 9 January 1991, n. 10.

Potable water, hot and cold

DPR 1095 August 3, 1968

Amendment to Article 125 of the General Health Regulation approved by Royal Decree 3 February 1901, n. 45, and amended by Royal Decree of 23 June 1904, n. 369.

European Directive 98/83/EC of 3 November 1998

on the quality of water intended for human consumption (OJ No. L 330, 12.05.1998)

D.L. February 2, 2001 n. 31

Implementation of Directive 98/83/EC on water intended for human consumption.

Ministerial Decree April 6, 2004 n. 174

Regulation of materials and objects that can be used in stationary collection, treatment, supply and distribution of water intended for human consumption.