

# ESENCOR

*the copper tube of the third millennium*

The ideal choice for supplying drinking water, for heating plants and for the distribution of gases and combustible liquids.


Manufactured with the most modern technologies available on today's world market, the result of scientific studies and tests that guarantee a considerably lower level of residual carbon than is required by the European manufacturing standard **EN 1057**, it is an excellent product against corrosion caused by the characteristics of waters present in water beds and in the public water mains.

It complies with **D.P.R. 1095 of 3 august 1968, European Council Directive n. 98/83/EC (G.U. n. L330 of 05/12/1998), D.L. of 2 february 2001 n. 31 and D.M. of 6 april 2004 n. 174** and is therefore suitable for drinking water applications.




**EN 1057** is the European reference standard at continental level for the manufacture of copper gas and water tubes in water and heating applications. It establishes characteristics in terms of chemical composition, mechanical properties, dimensions and tolerances and the tests that must be carried out during production in order to manufacture a product that complies with specifications.

Sampling plans during manufacture are applied according to the provisions of standard **EN 1057** and guarantee the product's conformity on the basis of tests performed by the internal and independent laboratory that is part of the Corporate Quality System certified according to **EN ISO 9001:2008**.

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

## TECHNICAL CHARACTERISTICS

Alloy – Rif. EN 1976	Cu-DHP CW024A (Cu = 99,90% min. - P = 0,015 ÷ 0,040%)		
Physical state according to EN 1057	Annealed R220	Half-Hard R250	Hard R290
Unit tensile strength– R min.	220 N/mm <sup>2</sup>	250 N/mm <sup>2</sup>	290 N/mm <sup>2</sup>
Percentage elongation – A min.	40%	20% o 30%	3%
Total carbon	C ≤ 0,20 mg/dm <sup>2</sup> max. according to standard EN 1057		
Inner surface	Glossy		
Marking on tube	 SILMET EN 1057 Cu 99.9 Ø X th. year quarter III <sup>2</sup> ESENCOR		
Dimensions and tolerances <sup>1</sup>	According to 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		

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

<sup>2</sup> the symbol III is present only in the half-hard physical state



## TUBES IN COILS - ANNEALED PHYSICAL STATE R220

dimensions Ø X wt mm	length of coils m	water content l/m	bursting pressure MPa	operating pressure MPa	coils per pack n	total meters per pack m	app. gross weight complete pack kg
6 X 1	50	0,0126	74,80	18,70	44	2.200	335
8 X 1	50	0,0283	56,10	14,03	36	1.800	375
10 X 1	50	0,0503	44,88	11,22	28	1.400	335
12 X 1	50	0,0785	37,40	9,35	22	1.100	315
14 X 1	50	0,1131	32,06	8,01	20	1.000	335
15 X 1	50	0,1327	29,92	7,48	18	900	335
16 X 1	50	0,1539	28,05	7,01	18	900	350
18 X 1	50	0,2011	24,93	6,23	14	700	315
22 X 1	25	0,3142	20,40	5,10	14	350	225
22 X 1,5	25	0,2835	30,60	7,65	14	350	320

## TUBES IN STRAIGHT LENGTHS - HALF-HARD PHYSICAL STATE R250

dimension Ø X wt mm	water content l/m	bursting pressure MPa	operating pressure MPa	bundles of tubes n	meters of bundles m	n° bundles n	meters master bun. m	app. gross weight complete master bundle kg
10 X 1	0,0503	51,00	12,75	40	200	11	2.200	530
12 X 1	0,0785	42,50	10,63	35	175	11	1.925	540
14 X 1	0,1131	36,43	9,11	30	150	11	1.650	530
15 X 1	0,1327	34,00	8,50	30	150	10	1.500	520
16 X 1	0,1539	31,88	7,97	25	125	11	1.375	520
18 X 1	0,2011	28,33	7,08	20	100	12	1.200	520
22 X 1	0,3142	23,18	5,80	15	75	13	975	515

## TUBES IN STRAIGHT LENGTHS - HARD PHYSICAL STATE R290

dimension Ø X wt mm	water content l/m	bursting pressure MPa	operating pressure MPa	bundles of tubes n	meters of bundles m	n° bundles n	meters master bun. m	app. gross weight complete master bundle kg
6 X 1	0,0126	98,60	24,65	--	--	--	--	--
8 X 1	0,0283	73,95	18,49	--	--	--	--	--
10 X 1	0,0503	59,16	14,79	40	200	11	2.200	530
12 X 1	0,0785	49,30	12,33	35	175	11	1.925	540
14 X 1	0,1131	42,26	10,56	30	150	11	1.650	530
15 X 1	0,1327	39,44	9,86	30	150	10	1.500	520
16 X 1	0,1539	36,98	9,24	25	125	11	1.375	520
18 X 1	0,2011	32,87	8,22	20	100	12	1.200	520
22 X 1	0,3142	26,89	6,72	15	75	13	975	515
22 X 1,5	0,2835	40,34	10,08	15	75	10	750	510
28 X 1	0,5309	21,13	5,28	10	50	15	750	535
28 X 1,5	0,4909	31,69	7,92	10	50	10	500	550
35 X 1	0,8553	16,90	4,23	7	35	15	525	500
35 X 1,5	0,8042	25,35	6,34	7	35	10	350	500
42 X 1	1,2566	14,09	3,52	--	--	--	--	--
42 X 1,5	1,1946	21,13	5,28	--	--	--	--	--
54 X 1,5	2,0428	16,43	4,11	--	--	--	--	--
54 X 2	1,9635	21,91	5,48	--	--	--	--	--
64 X 2	2,8274	18,49	4,62	--	--	--	--	--
76,1 X 2	4,0828	15,55	3,89	--	--	--	--	--
88,9 X 2	5,6612	13,31	3,33	--	--	--	--	--
108 X 2,5	8,3323	13,69	3,42	--	--	--	--	--