COPPER TUBES

# TALOS®

BUILDING PLUMBING INSTALLATIONS



HALCOR

ТАШЕВ-ГАЛВИНГ ООД
www.tashev-galving.com



HALCOR

HALCOR is a large-scale modern industrial company with over sixty years of experience in metal processing. It holds a significant position in European and global markets and has five modern plants; four in Greece and one in Bulgaria.

The company is dedicated to achieving high quality. It has ISO 9001:2000 certification, uses state-of-the-art technology and employs highly skilled personnel. Substantial, continual investment in research and know-how allows the company to create innovative new products, which support its aim of being a market leader.

At the same time, HALCOR is committed to sustained development and environmental protection. As such, its production processes are regulated by an ISO 14001:2004 certified Environmental Management System.

Aiming at the total satisfaction of all of its customers' needs, the company focuses on responding reliably and rapidly to demand. It provides exceptional support for its products, which are distributed to more than fifty countries worldwide. HALCOR combines size, strength and technology to achieve its overall vision of putting metals at man's disposal.

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Альтавит ООД
www.altavit.com

COPPER TUBES
TALOS®

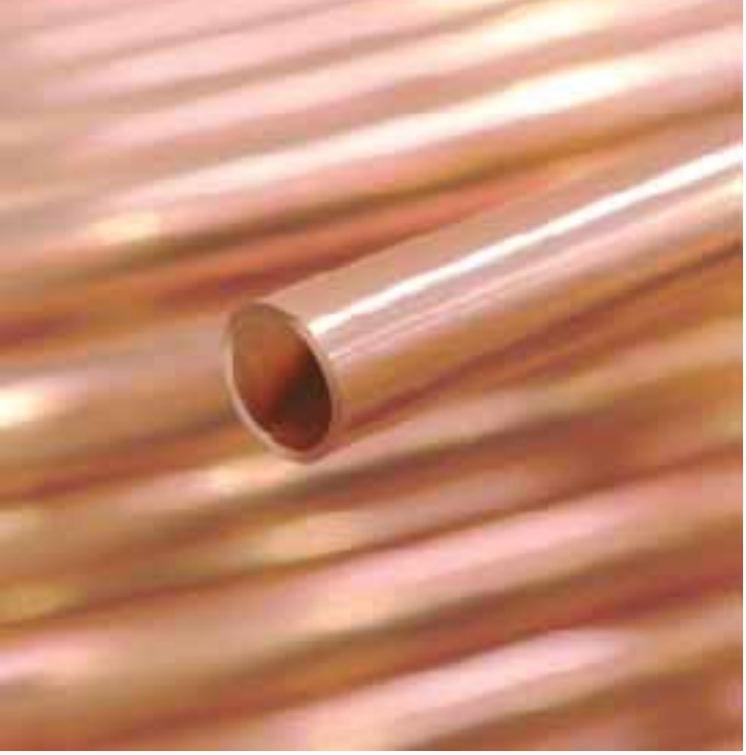
## Versatility with the dependability of copper

TALOS® copper tubes, with their high quality of manufacture provide:

- **Unlimited lifetime.**
- **Resistance to pressure, temperature and fire.**
- **Low thermal expansion and enhanced shape stability.**
- **Complete impermeability.**
- **Potable water hygiene.**
- **Style and space saving.**
- **Cost-effectiveness.**



ТАЦЦЕ ГАТЕЗНГ ООД
www.tsh-gateving.com



TALOS® copper tubes are widely used in a variety type of construction plumbing installations, such as potable water and hot water supply, central heating, natural gas, air conditioning, fire extinguishing networks, medical gas networks, etc.
They are manufactured according to harmonised European standards such as EN 1057:2006 and EN 13349 for coated pipes for sanitary applications, EN 12735 for air conditioning systems, EN 13348 for medical applications, etc.




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COPPER TUBES

TALOS®

WATER SUPPLY
HEATING
NATURAL GAS
COOLING

## TALOS® PLAIN COPPER TUBES ADVANTAGES

- TALOS® copper tubes are easy and cost-effective to install, and provide safe and secure operation.
- TALOS® copper tubes are resistant to high working pressures and temperatures.
- TALOS® copper tubes are completely air- and water- tight and retain their natural and mechanical properties unchanged over time.
- They are stable and self-supporting.

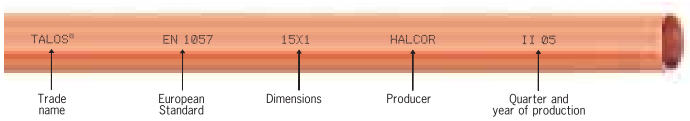
## TALOS HALF HARD COPPER TUBES SPECIAL ADVANTAGES

- Easy cold bending.
- Reduction of necessary fittings.
- Easier shaping of networks.
- Faster installation and working performance.
- Overall lower installation costs.

## MATERIAL

Copper phosphorus deoxidised (DHP-Cu) with min. copper content 99.9% and P=0.015% - 0.040%.

## MARKINGS




## MECHANICAL PROPERTIES

| Temper | EN 1057 Classification | Tensile strength N/mm² (min. tensile strength) | Minimum elongation A5% |
|---|---|---|---|
| Soft | R-220 | 220 | 40 |
| Half hard | R-250 | 250 | 30 |
| Hard | R-290 | 290 | 3 |

## SPECIFICATIONS

EN 1057: 2006

## QUALITY MARKS

RAL/DVGW, BSI, AFNOR, AENOR, NSF, NSAI.

ТАЛЕВТ ЕООД
www.tashev-talev.com

## I. STRAIGHT HALF HARD

| Diameter x thickness d x s (mm) | Internal diameter d internal (mm) | Nominal copper weight (kg/m) | External surface area ($m^2$/m) | Full volume (l/m) | Packing | | Maximum allowed working pressure (bar) |
|---|---|---|---|---|---|---|---|
| | | | | | Straight lengths | Pieces per bundle | |
| 10x0,70 | 8,6 | 0,182 | 0,031 | 0,058 | 3m | 900 | 90 |
| 10x1,00 | 8,0 | 0,252 | 0,031 | 0,050 | 4m | 250 | 133 |
| 12x0,70 | 10,6 | 0,221 | 0,038 | 0,088 | 3m | 800 | 74 |
| 12x1,00 | 10,0 | 0,308 | 0,038 | 0,079 | 4m | 400 | 109 |
| 15x0,70 | 13,6 | 0,280 | 0,047 | 0,145 | 3m | 600 | 59 |
| 15x0,80 | 13,4 | 0,318 | 0,047 | 0,141 | 3m | 600 | 68 |
| 15x1,00 | 13,0 | 0,391 | 0,048 | 0,133 | 4m | 600 | 86 |
| 15x1,20 | 12,6 | 0,463 | 0,047 | 0,127 | 4m | 125 | 104 |
| 18x0,80 | 16,4 | 0,384 | 0,056 | 0,211 | 3m | 450 | 56 |
| 18x1,00 | 16,0 | 0,475 | 0,056 | 0,201 | 4m | 450 | 71 |
| 18x1,20 | 15,6 | 0,563 | 0,056 | 0,191 | 4m | 100 | 86 |
| 22x0,80 | 20,4 | 0,474 | 0,069 | 0,327 | 3m | 300 | 45 |
| 22x0,90 | 20,2 | 0,531 | 0,069 | 0,320 | 3m | 300 | 51 |
| 22x1,00 | 22,0 | 0,587 | 0,069 | 0,314 | 4m | 300 | 57 |
| 22x1,50 | 19,0 | 0,860 | 0,069 | 0,284 | 4m | 80 | 88 |

## II. STRAIGHT HARD

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28x0,80 | 26,4 | 0,609 | 0,087 | 0,547 | 3m | 200 | 43 |
| 28x0,90 | 26,2 | 0,682 | 0,087 | 0,539 | 3m | 200 | 48 |
| 28x1,00 | 26,0 | 0,087 | 0,087 | 0,531 | 4m | 200 | 54 |
| 28x1,50 | 25,0 | 0,087 | 0,087 | 0,491 | 4m | 60 | 82 |
| 35x1,00 | 33,0 | 0,950 | 0,110 | 0,856 | 3m | 100 | 43 |
| 35x1,50 | 32,0 | 1,410 | 0,110 | 0,804 | 4m | 50 | 65 |
| 35x2,00 | 31,0 | 1,844 | 0,110 | 0,754 | 4m | 50 | 88 |
| 42x1,00 | 40,0 | 1,148 | 0,131 | 1,256 | 3m | 90 | 35 |
| 42x1,20 | 39,6 | 1,368 | 0,131 | 1,231 | 3m & 4m | 90 | 43 |
| 42x1,50 | 39,0 | 1,700 | 0,131 | 1,193 | 4m | 40 | 54 |
| 54x1,00 | 52,0 | 1,484 | 0,170 | 2,123 | 3m | 60 | 27 |
| 54x1,20 | 51,6 | 1,771 | 0,170 | 2,090 | 3m & 4m | 60 | 33 |
| 54x1,50 | 51,0 | 2,202 | 0,170 | 2,042 | 4m | 60 | 41 |
| 54x2,00 | 50,0 | 2,906 | 0,170 | 1,962 | 4m | 30 | 56 |
| 64x2,00 | 60,0 | 3,467 | 0,201 | 2,827 | 3m | 25 | 47 |
| 76,1x2,00 | 72,1 | 4,144 | 0,239 | 4,083 | 3m | 20 | 39 |
| 88,9x2,00 | 84,9 | 4,859 | 0,279 | 5,661 | 4m | 15 | 33 |
| 108x2,50 | 103,0 | 7,375 | 0,339 | 8,332 | 4m | 10 | 34 |

## III. SOFT COILS

| | | | | | Plain in coils (m) long | Plain coils per pallet | |
|---|---|---|---|---|---|---|---|
| 11x0,75 | 9,5 | 0,287 | 0,034 | 0,071 | 50 | 96 | 67 |
| 15x1,00 | 13,0 | 0,391 | 0,047 | 0,133 | 50 | 30 | 66 |
| 18x1,00 | 16,0 | 0,475 | 0,056 | 0,201 | 25 | 40 | 54 |
| 22x1,00 | 20,0 | 0,587 | 0,069 | 0,314 | 25 | 40 | 44 |
| 18x1,50 | 17,0 | 0,692 | 0,057 | 0,177 | 25 | 40 | 84 |
| 22x1,50 | 19,0 | 0,860 | 0,069 | 0,284 | 25 | 30 | 67 |

Non-standard dimensions are manufactured upon request.

ТАЦЕВ-ЛАТВИЯ ООД
www.tashev-gaving.com



COPPER TUBES

TALOS®

# FIRE EXTINGUISHING NETWORKS

## Maximum fire protection and safety

TALOS® copper tubes are the fastest and most cost-effective choice, for the construction of permanent fire extinguishing water supply networks and automatic sprinkler systems.

TALOS® copper tubes for fire extinguishing networks, provide substantial advantages:

- Smooth surface with minimal pressure loss due to friction, resulting in the need for smaller cross-sections, for specific water supply requirements.
- Various options in coupling methods.
- Easy to transport, install and support, even in limited spaces.
- High thermal conductivity that ensures prevention of extreme temperature peaks.
- Completely air- and water-tight and practically maintenance-free.
- Excellent corrosion resistance, compared to other metals.
- Extreme temperature resistance (copper melting point 1083 $^{0}$C).
- Fully recyclable.
- Tested and reliable for all types of plumbing applications.

TALOS® copper tubes are the ideal material for the construction of fire extinguishing installations in different areas, such as: Hospitals, Factories, Warehouses, Schools, Museums, Restaurants, Hotels, Sports facilities, Offices, Shops, Car Parks, Houses.

TALOS® copper tubes are covered by a 30-year manufacturer's guarantee for good performance.

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## MATERIAL

Copper phosphorus deoxidised (minimum copper content 99.9%, phosphorus concentration P=0.015% - 0.04%, classified as CW024A, or Cu-DHP, according to the European alloy coding system.

## MECHANICAL PROPERTIES

| Temper | EN 1057 Classification | Tensile strength N/mm² (min. tensile strength) | Minimum elongation A5% |
|---|---|---|---|
| Soft | R-220 | 220 | 40 |
| Half hard | R-250 | 250 | 30 |
| Hard | R-290 | 290 | 3 |

## SPECIFICATIONS

EN 1057:2006

TALOS® copper tubes comply fully with the EN 1057:2006 standard for water supply and permanent fire extinguishing networks.

## QUALITY MARKS

RAL/DVGW, BSI, AFNOR, AENOR, NSAI.

## STANDARD DIMENSIONS

| Diameter x thickness d x s (mm) | Internal diameter d internal (mm) | Nominal copper weight (kg/m) | External surface area (m²/m) | Full volume (l/m) | Packing | |
|---|---|---|---|---|---|---|
| | | | | | Type | Pieces per bundle |
| 15x1,00 | 13,0 | 0,391 | 0,047 | 0,133 | Straight lengths of 4m | 600 |
| 18x1,00 | 16,0 | 0,475 | 0,057 | 0,211 | | 450 |
| 22x1,00 | 22,0 | 0,587 | 0,069 | 0,314 | | 300 |
| 28x1,00 | 26,0 | 0,755 | 0,088 | 0,531 | | 200 |
| 35x1,50 | 32,0 | 1,405 | 0,110 | 0,804 | | 50 |
| 42x1,50 | 39,0 | 1,699 | 0,132 | 1,195 | | 40 |
| 54x1,50 | 51,0 | 2,202 | 0,170 | 2,043 | | 60 |
| 54x2,00 | 50,0 | 2,908 | 0,170 | 1,963 | | 30 |
| 64x2,00 | 60,0 | 3,467 | 0,201 | 2,827 | | 25 |
| 76,1x2,00 | 72,1 | 4,144 | 0,239 | 4,083 | | 20 |
| 88,9x2,00 | 84,9 | 4,859 | 0,279 | 5,661 | | 15 |
| 108x2,50 | 103,0 | 7,375 | 0,339 | 8,332 | | 10 |

ТАШЕВ-ГАЛВИНГ ООД
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COPPER TUBES

TALOS MED™

# MEDICAL GAS DISTRIBUTION NETWORKS

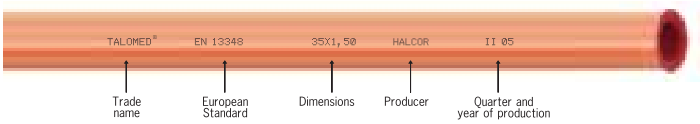
## Cleanliness and resistance

In the sensitive healthcare areas and installations, it is imperative to use materials that safeguard cleanliness, neat appearance and durability. TALOS MED™ copper tubes, thanks to the natural strength of copper they can withstand high working pressures with unlimited durability, hence they are the ideal choice for the construction of the distribution networks of the medical gases. TALOS MED™ copper tubes are manufactured according to the requirements of standard EN 13348:2001. They are supplied with end caps to prevent contamination by foreign matter intrusion during storage or transportation.

## MATERIAL

Copper phosphorus deoxidised (DHP-Cu) with min. copper content 99.9% and P= 0.015% - 0.040%.

## MARKINGS




## MECHANICAL PROPERTIES

| Temper | EN 13348 Classification | Tensile strength N/mm² (min. tensile strength) | Minimum elongation A5% |
|---|---|---|---|
| Soft | R-220 | 220 | 40 |
| Hard | R-290 | 290 | 3 |

## SPECIFICATIONS

EN 13348: 2001

ТАШЕВ-ГАЗ ООД
www.tashev-gas.com



## STANDARD DIMENSIONS

| Diameter x thickness d x s (mm) | Internal diameter d internal (mm) | Nominal copper weight (kg/m) | External surface area ($m^2$/m) | Full volume (l/m) | Packing |
|---|---|---|---|---|---|
| 6x1,00 | 4,0 | 0,140 | 0,019 | 0,013 | Straight lengths of 5m |
| 8x1,00 | 6,0 | 0,196 | 0,025 | 0,028 | |
| 10x1,00 | 8,0 | 0,252 | 0,031 | 0,050 | |
| 12x1,00 | 10,0 | 0,308 | 0,038 | 0,079 | |
| 15x1,00 | 13,0 | 0,391 | 0,048 | 0,133 | |
| 18x1,00 | 16,0 | 0,475 | 0,056 | 0,201 | |
| 22x1,00 | 22,0 | 0,587 | 0,069 | 0,314 | |
| 28x1,00 | 26,0 | 0,758 | 0,087 | 0,531 | |
| 35x1,50 | 32,0 | 1,410 | 0,110 | 0,804 | |
| 42x1,50 | 39,0 | 1,700 | 0,131 | 1,193 | |
| 54x2,00 | 50,0 | 2,906 | 0,170 | 1,962 | |
| 64x2,00 | 60,0 | 3,467 | 0,201 | 2,827 | |
| 76,1x2,00 | 72,1 | 4,144 | 0,239 | 4,083 | |
| 88,9x2,00 | 84,9 | 4,857 | 0,279 | 5,658 | |
| 108x2,50 | 103,0 | 7,370 | 0,339 | 8,328 | |

Different sizes and lengths are available upon request.

ТАЦЕТ АПВКИГ ООД
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ТАШЕВ-ГАЛВИНГ ООД
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PLASTIC COATED COPPER TUBES

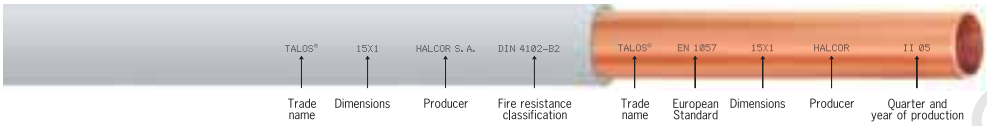
TALOS®

WATER SUPPLY
HEATING
COOLING

## MATERIAL

Copper phosphorus deoxidised (DHP-Cu) with min. copper content 99.9% and P=0.015% - 0.040%.

## MARKINGS




## MECHANICAL PROPERTIES

| Temper | EN 1057 Classification | Tensile strength N/mm² (min. tensile strength) | Minimum elongation A5% |
|---|---|---|---|
| Soft | R-220 | 220 | 40 |
| Hard | R-290 | 290 | 3 |

## SPECIFICATIONS

EN 13349:2002, EN 1057:2006.
They are classified as B2 according to DIN 4102 fire resistance classification system.

## QUALITY MARKS FOR COPPER TUBES

AFNOR.
Copper tube: RAL, BSI, AENOR, AFNOR, NSF, NSAI.

## STANDARD DIMENSIONS
## I. SOFT COILS

| Copper tube ext. diam. x thickness d x s (mm) | Overall ext. diameter D (mm) | Tube full volume (l/m) | Nominal copper weight (kg/m) | Thermal* capacity (Kcal/h) | Min. bending radius manually (mm) | Min. bending radius with bending tool (mm) | Packing in coils (m) long |
|---|---|---|---|---|---|---|---|
| 12 x 1,00 | 16 | 0,079 | 0,308 | 6.700 | 100 | – | 25 or 50 |
| 15 x 1,00 | 19 | 0,133 | 0,391 | 11.000 | 120 | – | |
| 16 x 1,00 | 20 | 0,154 | 0,420 | 13.300 | 130 | – | |
| 18 x 1,00 | 22 | 0,200 | 0,475 | 17.200 | 145 | – | 25 |
| 22 x 1,00 | 26 | 0,315 | 0,537 | 27.200 | 175 | – | |
| 15 x 0,80 | 19 | 0,141 | 0,318 | 12.100 | 125 | – | 25 or 50 |
| 16 x 0,80 | 20 | 0,163 | 0,340 | 14.000 | 135 | – | |
| 18 x 0,80 | 22 | 0,211 | 0,385 | 18.200 | 150 | – | 25 |

## II. STRAIGHT HARD

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 x 1,00 | 19 | 0,133 | 0,391 | 11.000 | – | 55 | Straight lengths of 4m |
| 16 x 1,00 | 20 | 0,154 | 0,420 | 13.300 | – | 60 | |
| 18 x 1,00 | 22 | 0,191 | 0,563 | 17.200 | – | 70 | |
| 22 x 1,00 | 26 | 0,314 | 0,587 | 27.200 | – | 80 | |

* For a temperature drop of 20 °C and a flow rate of 1.2 m/sec.

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