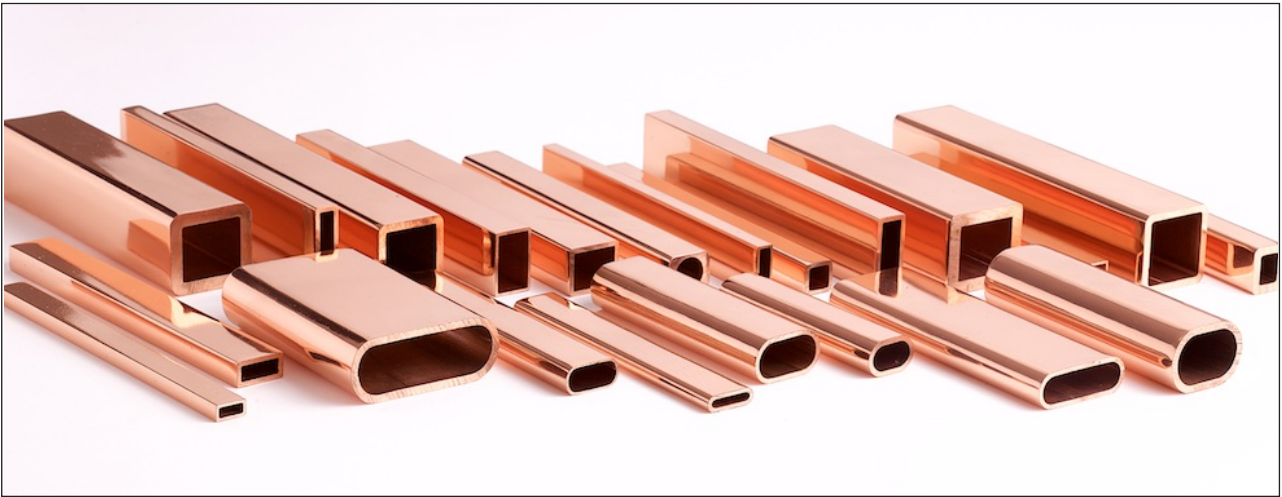


# Engineering Copper Tubes Data Sheet



Made to order so contact our Sales department with FULL enquiry. Average manufacturing time is 4 weeks. We manufacture/distribute to the following European Specifications (American ASTM can also be offered):  
BS EN 12449:1999 BS EN 12541:1999 BS EN 13600:2002

**BS EN 12449** Seamless, round tubes for general purposes.

**Material Analysis (C106)**

Material Grade Phosphorus de-oxidised copper; Cu-DHP or CW024A as defined in BS EN 1976.

Minimum Copper Content 99.90 % (including silver)

Phosphorus 0.015-0.040 %

Total Impurity Maxima 0.060 % (excluding phosphorus and silver)

**Mechanical Properties**

**BS EN 12449** Seamless, round tubes for general purposes



Material Temper	Tensile Strength min. (N/mm2)	Elongation min. (%)	Hardness (Indicative) HV5 VPN
R200 (soft)	200	40	40-65
R250 (Half Hard)	250	20	70-100
R290 (Hard)	290	5	95-120

**BS EN 12451** Seamless, round tubes for heat exchangers

**Material Analysis**

Material Grade Phosphorus de-oxidised copper; Cu-DHP or CW024A as defined in BS EN 1976.

Minimum Copper Content 99.90 % (including silver)

Phosphorus 0.015-0.040 %

Total Impurity Maxima 0.060 % (excluding phosphorus and silver)

**Mechanical Properties**

**BS EN 12451** Seamless, round tubes for heat exchangers



Material Temper	Tensile Strength min. (N/mm2)	Elongation min. (%)	Hardness (Indicative) HV5 VPN
R250 (Half Hard)	250	20	75-100
R290 (Hard)	290	5	Over 100

**BS EN 13600** Seamless, round tubes for electrical purposes

**Material Analysis (HC C101)**

Material Grade Phosphorus de-oxidised copper; Cu-ETP or CW004A as defined in BS EN 1976.

Minimum Copper Content min 99.90 % (including silver)

Max Oxygen – 0.060 % is permitted, subject to agreement between the purchaser and Lawton Tubes

Max Lead – 0.005 %

Total Impurity Maxima 0.030 % (excluding oxygen, lead and silver)

**Material Analysis (HC C103)**

Material Grade Phosphorus de-oxidised copper; Cu-OF or CW008A as defined in BS EN 1976.

Minimum Copper Content min 99.95 % (including silver)

Max Lead – 0.005 %

Total Impurity Maxima 0.030 % (excluding lead and silver)

**Mechanical Properties**

**BS EN 13600** Seamless, round tubes for electrical purposes

Material Temper	Tensile Strength min. (N/mm2)	Elongation min. (%)	Hardness (Indicative) HV5 VPN
R200 (soft)	200	40	35-65
R250 (Half Hard)	250	15	65-95
R290 (Hard)	290	5	90-110