



# HOWELL METAL

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## PRODUCT STANDARDS and CERTIFICATION

Howell Metal copper tubing products are manufactured to current industry standards for chemical, mechanical, and cleanliness using the guidelines of American Society of Testing and Material (ASTM) standards, Federal Specifications WWT-775B and WWT-799B, National Fire Protection Association standard for Health Care Facilities NFPA99, Compressed Gas Association G-4.1, and NSF-61-G. All tubing is 100% eddy current tested for defects in accordance with ASTM testing requirements.

Howell Metal copper tubing products are made of UNS C12200 grade copper, are seamless, free of mercury and asbestos and do not contact mercury or asbestos bearing equipment in any phase of manufacturing, storage, or shipping and are RoHS and REACH compliant.

Although Howell Metal strives to meet all requirements specified in ASTM, Standard Tube may not fully meet ASTM dimensional requirements. Standard Tube will be provided unless Certified Tube is clearly defined on the Purchase Order. When specified at order placement, Howell Metal can supply Certified Tube to meet all requirements of the current applicable ASTM specification, at an additional cost.

### SEAMLESS COPPER WATER TUBE – Types K, L, & M

ASTM B-88, E-243, NSF-61-G, ANSI-372

for both hard and soft tubing. *Restriction Statement: "Copper tube (Alloy C12200) is certified by NSF to NSF/ANSI 61 for use in drinking water supplies of pH 6.5 and above. Drinking water supplies that are less than pH 6.5 may require corrosion control to limit the leaching of copper into the drinking water."*

### SEAMLESS COPPER DRAINAGE TUBE – Type DWV

ASTM B-306, E-243

### SEAMLESS COPPER TUBE FOR MEDICAL GAS SYSTEMS

ASTM B-819, E-243

*Manufactured tube undergoes a cleaning process and are then plugged and charged with dry nitrogen with the exception of "K/OXY" which is cleaned, purged with dry nitrogen and capped.*

### SEAMLESS COPPER TUBE FOR AIR CONDITIONING AND REFRIGERATION FIELD SERVICE

ASTM B-280, E-243

*Manufactured straight length tube undergoes a cleaning process and are then plugged and charged with dry nitrogen. Manufactured coiled length tube undergoes a cleaning process and are then purged with dry nitrogen and capped.*

*All tubing labeled as "ACR", "ACR/OXY", "L/OXY", or "K/OXY" is manufactured to meet the cleanliness requirements of 0.0035 g/ft<sup>2</sup> (0.038 g/m<sup>2</sup>) maximum as required by the guidelines of ASTM B-280 or B-819 as applicable.*

### SEAMLESS COPPER TUBE FOR LINE SETS

ASTM B-1003, E-243

**All manufactured material printed or incised "HOWELL US" is proudly made in the United States of America from No. 1 recycled scrap copper and compliant with the "Buy American" Section (1605) of the American Recovery and Reinvestment Act of 2009 (Public Law 111-5).**

All copper tube products shall be permanently marked to denote the manufacturer and type of product. Straight lengths will also have ink printing to denote the manufacturer and type of product. Product labeled Mueller may be offered and sold through Howell Metal as an affiliated company. Mueller tube is manufactured in the United States and is made to meet all applicable standards



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