

## Wire, Solid Bare Copper, Dead-Soft-Annealed



### 1. Scope

This standard covers the requirements for dead-soft-annealed, solid bare copper wire.

This standard applies to the following Seattle City Light (SCL) stock numbers:

<u>Stock No.</u>	<u>Size (AWG)</u>
610208	4
610210	6
610218	14
610222	18

### 2. Application

The larger sizes of dead-soft-annealed wire are used for hand tying copper primary conductor to pin insulators and making jumpers.

Dead-soft-annealed wire falls between soft-drawn and dead-soft-drawn in hardness.

The hardness of copper wire is determined by stretching a ten-inch-long sample until it breaks and then measuring the length of the sample. The percent of stretch is called elongation. Dead-soft-drawn has an elongation of 40%. Dead-soft-annealed (this standard) has an elongation of 35%. The elongation of soft-drawn ranges between 15 and 35%. The elongation of medium- and hard-drawn ranges between 1.0 and 1.9%. The practical, upper limit of softness for copper wire is about 48%. Annealing past this point significantly compromises tensile strength.

### 3. Industry Standards

Wire shall meet the applicable requirements of the following industry standard:

**ASTM B3-2001 (2007)** - Standard Specification for Soft or Annealed Copper Wire

#### 4. Requirements

Wire shall meet the applicable requirements of ASTM B3 and this standard with the following clarification: elongation shall be 35% or greater (dead-soft-annealed).

**Table 4. Requirements**

Stock No.	Size (AWG)	Diameter (in)	Weight (lb per 100 ft)
610208	4	0.2043	12.64
610210	6	0.1620	7.95
610218	14	0.0641	1.24
610222	18	0.0403	0.492

#### 5. Packaging

Wire shall be packaged to prevent damage during shipping, handling, and storage.

Wire shall be packaged according to Table 5.

**Table 5. Packaging**

Stock No.	Size (AWG)	Standard Package	Length, Nominal (ft per standard package)	Weight, Nominal (lb per standard package)
610208	4	Spool	200	25.0
610210	6	Spool	315	25.0
610218	14	Spool	100	1.3
610222	18	Spool	100	0.5

Each package shall be marked with:

- Length of wire
- Manufacturer name and address
- Seattle City Light stock number

Each shipping container shall be marked with:

- Seattle City Light purchase order number

#### 6. Issuance

Stock Unit: FT

#### 7. Approved Manufacturers

Kris-Tech Wire Company  
Nehring Electrical Works Company  
Service Wire Company  
Southwire

#### 8. References

**SCL Material Standard 6102.2**; "Wire, Soft, Round, Bare Copper" (renumbered)

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**Standard Handbook for Electrical Engineers**; 8<sup>th</sup> Edition; A.E. Knowlton, McGraw Hill Book Company, Inc., 1949