

Wire, Solid, Copper, Weather-Resistant, Polyethylene-Covered



1. Scope

This standard covers the material requirements for solid copper wire, covered with a single layer of weather-resistant polyethylene.

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

Stock No.	Size (AWG)	Temper	Packaging
611444	6	Soft Drawn (SD)	Coil
611393	4	Medium Hard Drawn (MHD)	Reel
611392	4	Medium Hard Drawn (MHD)	Coil
014121	4	Soft Drawn (SD)	Reel
611442	4	Soft Drawn (SD)	Coil
611390	2	Medium Hard Drawn (MHD)	Reel

2. Application

Although the wire covering is not treated as an insulation, it provides an increased level of protection from momentary grounded contacts caused by wildlife, excessive wind, and tree limbs or other objects that may interfere with the high voltage lead. This wire may be used on distribution system voltages up to 35 kV.

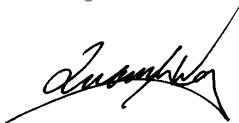
3. Industry Standards

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

ICEA S-70-547; Weather-Resistant Polyethylene Covered Conductors

ASTM D-1248; Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable

NEMA WC 26; Binational Wire and Cable Packaging Standard



4. Requirements

4.1 Conductor

Conductor shall meet the requirements of Section 2 of ICEA S-70-547.

Table 4.1. Conductor Dimensions

Conductor Size	Wire Diameter (in)
#6 AWG	0.162
#4 AWG	0.204
#2 AWG	0.258

4.2 Covering

Covering shall meet the requirements as detailed in Section 3 of ICEA S-70-547.

Covering shall be high molecular weight or cross-linked polyethylene.

Covering shall meet the requirements for 90 °C for normal service operation.

Table 4.2. Covering Thickness

Conductor Size	Thickness, minimum (mils)	Thickness, nominal (mils)
#6 AWG	27	30
#4 AWG	27	30
#2 AWG	41	45

5. Testing

Wire shall be tested in accordance with Section 5 of ICEA S-70-547.

Test results shall be provided upon request.

6. Packaging

Wire packaging shall meet the requirements of NEMA WC-26 and Table 6 below.

Table 6. Packaging Details

Stock No.	Conductor Size (AWG)	Temper	Packaging	Length Per Package (ft)	Outside Flange Diameter, maximum (in)	Inside Transverse Width, maximum (in)	Wire Weight per 100 ft (lb)	Weight per reel (lb), approx.
611444	#6	SD	Coil	1700	n/a	n/a	9	n/a
611393	#4	MHD	Reel	10,000	36	18	14	1430
611392	#4	MHD	Coil	1100	n/a	n/a	14	n/a
014121	#4	SD	Reel	10,000	36	18	14	1430
611442	#4	SD	Coil	1100	n/a	n/a	14	n/a
611390	#2	MHD	Reel	4545	n/a	n/a	22	1000

6.1 Coils

The minimum inside diameter of the coils shall be 18 inches, and the maximum inside diameter shall be 20 inches. The maximum outside diameter of the coils shall not exceed 29 inches. The maximum height of the coils shall not exceed 4-1/2 inches. These coil dimensions do not apply to AWG 6 wire (SCL Stock No. 611444).

The coil shall be wound in such a manner as to permit easy payoff of the entire coil from the payoff reel.

Coils shall be secured to pallets.

6.2 Reels

The inner end of the wire shall be brought to the outside of the reel flange and securely fastened with steel staples appropriate to the wire size. The inner end shall not be brought out through the reel arbor.

The outer end shall be fastened to the inner side of the flange with steel staples, appropriate to the size, to the inner side of the reel flange.

The reel arbor hole shall have a diameter of 2-3/4 inches.

Reels shall be provided with metal bushings if gross weight of the reel exceeds 1000 lb.

7. Marking

Each reel shall be legibly marked with the following information:

- Manufacturer identification
 - Product description
 - Shipping length of cable on reel
 - Gross weight
 - Net weight
 - Tare weight
 - Date of manufacture
 - Reel identification according to NEMA WC-26, Section 5
 - Seattle City Light stock number
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8. Shipping

Reels shall be shipped and delivered in the upright position (on the flange edges) in order to ensure safe unloading with a forklift.

9. Issuance

Stock Unit: FT

10. Approved Manufacturers

Kris-Tech Wire Company
Nehring Electrical Works
Republic Wire, Inc.
Service Wire Company
Southwire

11. Sources

ANSI C8.35; Wire and Cable Covered, Weather-Resistant Polyolefin, American National Standards Institute, New York, NY 1975

SCL Material Standard 6114.50 (canceled); "Wire, Copper, Weather-Resistant, Polyethylene-Type"

Shipek, John SCL Standards Supervisor, subject matter expert, and originator of 6004.50

Tilley, Kathy; SCL Electrical Engineering support specialist and subject matter expert for 6004.50