

**MATERIAL STANDARD****WIRE, ACSR, BARE****1. Foreword****1.1 Scope**

This standard covers the requirements for bare, concentric-lay stranded aluminum conductor, steel reinforced (ACSR) wire. Aluminum strands are made from round 1350-H19 (extra hard) alloy wire. Steel, core strands are zinc coated.

This material standard applies to the following Seattle City Light Stock Numbers:

Stock No.	Size (kcmil/AWG)	Stranding (aluminum/steel)	Code Word
014778	#2	6/1	Sparrow
600020	397.5	18/1	Chickadee
600021	397.5	26/7	Ibis
600040	795	26/7	Drake
600041	795	30/19	Mallard
600044	954	45/7	Rail

Wire identified by code word shall be consistent with the requirements of Aluminum Association Table 6. Code words define:

- Size (kcmil/AWG)
- Stranding (aluminum/steel)

**1.2 Application**

Wire is used as a bare, overhead, transmission or distribution conductor.

Wire with a high proportion of aluminum is better suited for applications requiring low electrical impedance. Wire with a high proportion of steel is better suited for long span applications.

For similar, all aluminum conductors, refer to Material Standard 6000.20.

**1.3 Industry Standards**

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

**Aluminum Association Code Words for Overhead Aluminum Electrical Conductors**, Seventh Edition (January 1999)

**ASTM B232-2001** - Standard Specification for Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Reinforced (ACSR)

**NEMA WC-26-2000** - Binational Wire and Cable Packaging Standard

Standard Coordinator  
Curtis Lu

Standards Engineering Supervisor  
John Shipek

Division Director  
Andrew Strong

**Wire, ACSR, Bare**

**1.4 Conflict**

Where conflict exists, the following order of precedence shall apply:

1. Seattle City Light Purchase Order
2. This Seattle City Light Material Standard
3. Aluminum Association
4. ASTM standards
5. Other industry standards

**2. Construction**

Wire shall meet the requirements of ASTM B232 and Table A with the following clarifications:

- Wire shall be Class AA.
- Wire shall be ACSR/GA using Class A zinc-coated steel wire.

**Table A**

Stock No.	Size (kcmil/AWG)	Stranding (aluminum/steel)	Code Word	Diameter, Nominal (in)	Minimum-Rated Strength (lb)
014778	#2	6/1	Sparrow	0.3116	2,850
600020	397.5	18/1	Chickadee	0.743	9,900
600021	397.5	26/7	Ibis	0.783	16,300
600040	795	26/7	Drake	1.108	31,500
600041	795	30/19	Mallard	1.140	38,400
600044	954	45/7	Rail	1.165	25,900

**3. Detailed Packaging Requirements**

Wire shall be packaged on reels according to the requirements of WC 26 and Table B or as specified otherwise on the request for quote or purchase order.

**Table B**

Stock No.	Size (kcmil/AWG)	Reel Type	Maximum Outside Flange Diameter (in)	Maximum Outside Width (in)	Nominal Drum Diameter (in)	Length per Reel ± %, (ft)	Approximate Weight per 100 ft (lb)
014778	#2	Wood	36	24	17	10,000	9.1
600020	397.5	Wood	66	38	36	9,630	43.1
600021	397.5	Wood	60	33	28	6,945	54.6
600040	795	Steel - RMT	84	43	42	6,940	109.3
600041	795	Steel - RMT	84	52	42	7,980	123.4
600044	954	Steel - RM	68	44	36	5,000	107.4

Reel gross weight shall not exceed 17,000 lb.

Actual quantity per reel may vary from the quantity stated on the purchase order by plus or minus 10%.

Wood reels shall be either reusable type according to WC 26, Section 2.2, or nonreturnable type according to WC 26, Section 2.3.

**3. Detailed Packaging Requirements, continued**

Wood reels may be new or recycled.

Recycled wood reels (when provided) shall have the surface of both outside flanges painted over with a solid color.

Recycled wood reels (when provided) shall be equivalent to new in quality and strength.

Type RM steel reels shall be returnable, with fluted or corrugated flange and flat bar tires according to WC 26, Section 2.1.2.

Type RMT steel reels shall be returnable, with fluted or corrugated flange and I-beam tires according to WC 26, Section 2.1.2.

Reels shall be protected for shipment with coverings consistent with the recommendations of NEMA WC 26, Section 4.

The inner end shall not be brought out through the reel arbor.

The outer end shall be securely fastened to the inner side of the flange.

Wood reels shall be provided with metal bushings if the gross weight of the reel exceeds 1,000 pounds.

Each reel shall be legibly marked with the following information:

- Manufacturer identification
- Product description, including code word
- Shipping length of wire on reel
- Gross weight
- Tare weight
- Net weight
- Date of manufacture
- Reel identification according to NEMA WC 26, Section 5
- Seattle City Light purchase order number
- Seattle City Light stock number

**4. Shipping**

Reels shall be shipped and delivered in the upright position (on the flange edges) on open flatbed trucks suitable for side unloading by forklift.

Reels shall not be strapped or palleted.

Wire shall be shipped to the address specified on the Purchase Order.

**5. Issuance**

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**6. Approved Manufacturers**

Alcan Cable

General/BICC

Nehring Electrical Works Company

Nexans Energy USA

Southwire Company