

Wire, Appliance, Silicone Rubber-Insulated, Fiberglass Braid Jacket



1. Scope

This standard covers the requirements for silicone rubber-insulated, high-temperature, #12 AWG, 65-strand appliance wire, also known as SRML or SFF-2 wire.

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

Stock No.	Jacket Color
612500	White
612501	Black
612502	Blue
612503	Red
012183	Yellow

2. Application

Silicone Rubber Motor Lead (SRML) or SFF-2 appliance wire is used for fire protection systems, high wattage lighting fixtures, control and power circuits, and other applications when high temperatures and abrasive environments are present.

This wire is suitable for operation at conductor temperatures up to 150 degrees C in indoor environments.

3. Industry Standards

Appliance wire shall meet the applicable requirements of the latest revision of the following standards:

ASTM B8; Standard Specification for Concentric-Lay-Stranded Copper Conductors, hard, Medium-Hard, or Soft

Standards Coordinator
Muneer Shetab

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John Shipek

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ASTM B33; Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes

ASTM B173; Standard Specification for Rope-Lay-Stranded Copper Conductors Having Concentric-Stranded Members, for Electrical Conductors

UL 758; Appliance Wiring Material

IEEE 383; IEEE Standard for Qualifying Electric Cables and Splices for Nuclear Facilities

UL 1581; Reference Standard for Electrical Wires, Cables, and Flexible Cords

NEMA WC 26; Binational Wire and Cable Packaging Standard

RoHS; European union Directive 2002/95/EC for Restriction of Hazard Substances

4. Requirements

4.1 General

Appliance wire shall meet the requirements of UL 758, Style 3070 and this standard. Where conflict exists, this standard shall apply.

Appliance wire shall be:

- Dual-rated types SRML/SFF-2
- Rated 600 V
- Rated 150° wet or dry
- RoHS compliant

4.2 Conductor

Conductor shall be #12 AWG

Conductor shall consist of 65 tinned copper strands.

Conductor shall be Class H stranded per ASTM B173.

4.3 Insulation

Conductor shall be insulated with silicone rubber.

Insulation thickness shall be:

- 27 mils, minimum
- 30 mils, nominal

Insulation shall strip free from the conductor.

Insulation color shall be white.

The finished insulated conductor (with covering/jacket removed) shall be wet-rated AWM.

5. Marking

Appliance wire insulation shall be durably and legibly marked throughout its length, at maximum intervals of 1 meter, with a marking legend.

The marking legend shall include, but not be limited to, the following information:

- Manufacturer identification
- Type letter or letters
- Conductor size
- Conductor stranding
- Voltage marking
- VW-1
- Mark of UL approval or listing

6. Testing

Appliance wire shall be tested according to the requirements of the standards listed in Section 3.

Test results shall be provided upon request.

7. Packaging

Appliance wire shall be packaged on 500-ft spools to prevent damage during shipping, handling, and inside storage.

Each spool shall be durably and legibly marked with:

- Manufacturer identification
- Month and year of manufacture
- Type letter or letters
- Conductor size
- Voltage rating
- Mark of UL approval
- SCL stock number

Shipping containers shall be legibly marked with:

SCL purchase order number

8. Issuance

Stock Unit: FT

9. Approved Manufacturers

Manufacturer	Distributor Part No.
Priority Wire and Cable, Inc.	12-01SRML
Cable USA, Inc.	701201C6
Radix Wire	JEM12T065

Note: Jacket color to be specified in the purchase order.

10. Sources

Shetab, Muneer; SCL Standards Engineer, subject matter expert, and originator of 6420.65

SCL Material Standard 6420.51; "Wire, Switchboard, Cross-Linked Polyethylene-Insulated"

Stock Catalog Page 60-36; July 11, 2014