



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 100 2010

**Specification for 75 Ω Smooth
Aluminum Subscriber Access Cable**

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1.0 SCOPE

- 1.1 This specification applies to the material, electrical and mechanical properties of seventy-five ohm smooth aluminum outer conductor coaxial cables as defined herein.
- 1.2 Seventy-five ohm smooth aluminum outer conductor coaxial cables are used to distribute radio frequency (R.F.) signals and power for voice, data, and video applications as applicable.

2.0 CENTER CONDUCTOR

2.1 Material

- 2.1.1 The center conductor shall be copper clad aluminum (CCA) or copper clad steel (CCS). The outer layer of copper shall be metallurgically bonded and continually cover the core prior to processing, the composite conductor shall meet the requirements of ASTM B 566- Class 10A or 10H, ASTM B 869.
- 2.1.2 Solid copper center conductor may also be available, if required by the user. Low DC resistance is the main advantage to using solid copper. The copper conductor shall meet the requirements of ASTM B1 and/or ASTM B3.

2.2 Joints

Factory joints in the finished product shall be allowed. The ultimate tensile strength in the joint area when tested per ASTM E-8 shall be 90% of the original unspliced wire.

2.3 Dimensions

- 2.3.1 Center conductor dimensions shall be 0.0708 inches (1.80 mm).
- 2.3.2 All center conductor tolerances shall be $\pm 1\%$.

2.4 Mechanical

- 2.4.1 Minimum break strength (MBS) of the copper clad aluminum (CCA) or copper clad steel (CCS) conductor shall be determined by multiplying the minimum cross sectional area by 20,000 psi (138 MPa) for CCA, and 115,000 psi (793 MPa) for CCS.