



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 88 2007

**Test Methods for
Polyethylene Jacket Longitudinal Shrinkage**

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Published by:

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1.0 SCOPE

- 1.1 The purpose of this test is to determine the amount of shrinkage of the jacketing material used on coaxial drop and distribution cables. This test procedure is applicable for use on either drop or distribution coaxial cables employing polyethylene (PE) jacketing material.

2.0 EQUIPMENT

- 2.1 A full draft circulation oven with a removable, thin, flat, horizontal bed of ceramic or glass beads. The oven shall be capable of meeting the following requirements for a period of four (4) hours.

$100 \pm 1^{\circ}\text{C}$ ($212 \pm 2^{\circ}\text{F}$) For Low Density Materials: $< 0.940 \text{ g/cm}^3$ @ 23°C (74°F)

$115 \pm 1^{\circ}\text{C}$ ($240 \pm 2^{\circ}\text{F}$) For High and Medium Density Materials: $> 0.940\text{g/cm}^3$ @ 23°C (74°F)

- 2.2 Band saw or hack saw

- 2.3 A temperature indicator in the range of the specified temperature shall be used.

3.0 TEST SAMPLES

- 3.1 Test samples shall be 6 ± 0.5 inches (150 ± 10 mm) long cut from the first 100 feet of the cable reel.
- 3.2 Test samples shall be cut clean and perpendicular to the longitudinal axis of the cable. The ends of the cable samples are to be clean and square.

4.0 TEST METHODS

- 4.1 Preheat the full draft circulating oven with the removable bed of ceramic or glass beads in the oven for 60 minutes (1 hour) to the temperature required.
- 4.2 Place the test samples on the bed in the oven without touching one another or anything else other than the bed.

5.0 INSPECTION

- 5.1 The test samples shall remain in the oven for four (4) hours at the specified temperature. Then without disturbing the test samples on the bed, remove the bed and test samples together. The bed and test samples should be placed on a flat horizontal surface that is in still air at room temperature.
- 5.2 After cooling for 60 minutes (1 hour) at room temperature, each specimen shall be measured for shrinkage of the jacket from each end of the outer conductor.
- 5.3 Record and document all measurements and observations.