

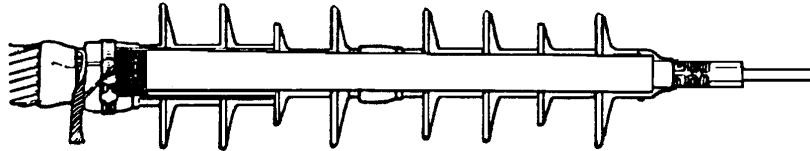
**MATERIAL STANDARD****TERMINATORS – HIGH VOLTAGE CABLES**

Figure 1. Cold Shrink

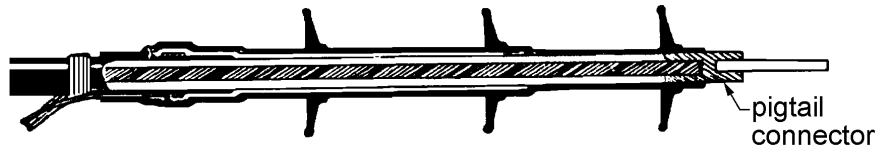


Figure 2. Heat Shrink

**1. Scope**

This specification is for outdoor isolated phase cable terminations to be used on single or multi-phase circuits of a 26.4 kV or 34.5 kV solid grounded neutral system.

**2. Construction**

- 2.1 The terminators shall be made of irradiated ethylene-propylene diene monomer (EPDM) formulated to resist severe atmospheric contamination without tracking and to withstand thermal, ultraviolet, and oxidation decomposition under electrical stress. The insulation shall comply with the ASTM D2303 (latest revision) test for liquid contaminant, inclined plane tracking, and erosion of insulating materials. Silicone rubber will be accepted for the weather shedding materials. Creepage distance shall be 24" minimum.
- 2.2 Cold Shrink Terminators (Figure 1) shall be a one-piece, EPDM relief tube inside a silicone skirted insulator that is a non-force fit.
- 2.3 Heat Shrink Terminators (Figure 2) shall have a coating of meltable adhesive or meltable tape on the inner wall, which on the application of heat, shall adhere to the cable jacket forming a watertight seal. The weather shedding skirts shall be heat-shrink non-force fit.

**3. Specifications**

All terminators shall meet the requirements of the latest revision of IEEE 48 for Class I terminations. Voltage rating and BIL shall be as shown on page 2 of this material standard.

**4. Packaging**

The terminator shall be packaged complete in self-contained kits including all material required for a single cable termination including skirts (modules), caps, and ground clamps.

**5. Instructions**

Each terminator package shall contain complete, current instructions for installation of all materials required for a single cable termination and any accessories. If the package contains three terminations, three sets of instructions shall be included.

*standards coordinator*

John Shipek

*standards supervisor*

John Shipek

*unit director*

Darnell Cola

**MATERIAL STANDARD**

Terminators – High Voltage Cables

**6. Details and Approved Manufacturers****6.1 Cold Shrink Terminators**

Refer to SCL Construction Guideline U5-26.20 for selecting appropriate Stock No. for a given cable size.

Fig.	Stock No.	Stock Unit	Voltage, kV	BIL, kV	Insulation OD Range, in.	Approved Manufacturer
						<b>3M</b>
1	686531	EA	35	200	0.64 – 0.90	7663 - S - HSG - 8
1	686532	EA	35	200	0.83 – 1.53	7664 - S - 8
1	012125	EA	35	200	1.05 - 1.80	7665 - S - HSG - 8
1	686534	KT	35	200	1.10 - 1.65	5697K*
1	012126	EA	35	200	1.53 - 2.32	7666 - S - HSG - 8

**6.2 Heat Shrink Terminators**

Fig.	Stock No.	Stock Unit	Voltage, kV	BIL, kV	Nominal Range	Insulation OD Range, in.	Approved Manufacturer	City Light Cable Size	Pigtail Connector Stock No.
							Raychem		
2	686521♥	EA	5	95	300 - 500	0.80 - 1.25	HVT - Z - 82 - SG	350	650578
2	686522♥	EA	15	110	400 - 1000	1.10 - 1.65	HVT - Z - 153 - SG	400 - 1000	na
2	686526♥	EA	25	150	#2 - 400	0.85 - 1.40	HVT - Z - 252/352 - SJ	#1 - 1/0 URD	686056
2	686527♥	EA	25	150	350 - 1000	1.25 - 1.80	HVT - Z - 253/353 - SJ	350 URD	650578
2	686528♥	EA	25	150	300 - 750	1.10 - 1.70	HVT - Z - 253/353 - SG	350	650578
								500	650579
								750	686075
2	686536♥	EA	35	200	750 - 1750	1.60 - 2.45	HVT - Z - 254/354 - SG	750 CR	686075
2	686538§	EA	46	250	1000 - 1500	1.97 - 2.56	EHVT - 464 - SG	1000 CR	677110

\* The unit of issue and the standard package is the "kit". Each "kit" includes three terminations. All other items on this page are issued in quantities of one each (EA).

♥ Pigtail connector not included. See Seattle City Light Material Standard 6772.00 for pigtail connectors.

§ Two bolt paddle not included. Shown on Seattle City Light Material Standard 6770.70.