

# WESTERN UNDERGROUND COMMITTEE

## GUIDE 2.4 (2.4/01/0268)

### HEAT-SHRINKABLE SPLICE TUBING

NOTE: This "Guide" summarizes the opinions, recommendations, and practices of the Western Underground Committee members and is issued only to assist these members in preparing their own specifications, or in making recommendations to specification agencies. Thus, this "Guide" may not reflect the complete requirements of each individual utility and is not binding upon them.

#### 1.0 SCOPE

These specifications cover the requirements for heat-shrinkable electrical splice tubing.

#### 2.0 GENERAL

2.1 The tubing with its sealing compound is intended to provide electrical insulation, mechanical protection and waterproofing for 600 volt electrical joints.

2.2 The tubing and the compound shall be suitable for installation below ground level in a box or direct buried and shall be capable of being submerged under water indefinitely.

2.3 The tubing and compound shall be capable of functioning (continuously) over a temperature range of -20°F to 200°F.

#### 3.0 DIMENSIONS

3.1 The following shall be standard sizes:

<u>MINIMUM</u> <u>EXPANDED - ID</u>	<u>MAXIMUM</u> <u>RECOVERED - ID</u>
0.75"	0.25"
1.10"	0.37"
1.25"	0.42"
1.50"	0.50"
2.00"	0.75"

3.2 The expanded internal diameter dimensions include the sealing compound.

3.3 Lengths shall vary, in 3-inch increments, from 3 inches through 12 inches.

3.4 Tolerances

3.4.1 The lengths of tubing shall not deviate from the standard lengths more than 0.0 inches and +1/2 inch.

3.5 The minimum all thickness when tubing is in the expanded state, and not including the sealing compounds, shall be:

30 mils for 0.75-inch diameter tube

40 mils for 1.10-inch diameter tube

40 mils for 1.25-inch and larger diameter tubes

3.6 The maximum length change upon complete recovery (shrinking) shall be  $\pm 10$  percent of expanded length.

#### **4.0 SHRINK RATIO**

The ratio of expanded inside diameter to recovered inside diameter shall be:

3.0 for 1.5 diameter tubes and smaller

2.5 for larger than 1.5-inch diameter tubes

#### **5.0 SEALING COMPOUND**

5.1 The entire inside surface of tubing shall be coated with a meltable compound.

5.2 The thickness of sealing compound shall not be less than 0.010 inch when tubing is in the expanded state.

#### **6.0 PERFORMANCE REQUIREMENTS**

The performance requirements are that the tubing shall provide adequate mechanical and electrical protection when used under the conditions described in Section 2.0 of this "Guide".