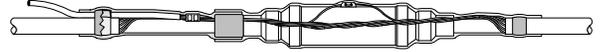




# Cold Shrink™ Stacked Sleeve Splice Jacket Kits

## SJ-1SS, SJ-2SS & SJ-3SS

### Data Sheet



## 1. Product Description

3M™ SJ-SS Series Cold Shrink™ Stacked Sleeve Splice Jacket Kits are a series of open ended, tubular rubber sleeves that combined with Scotch™ 2228 Rubber Mastic Tape and a Profile Bushing provide a sealed jacket over cable splices installed on Jacketed Concentric Neutral (JCN) and other types of jacketed power cable. The Scotch™ 2228 Rubber Mastic Tape provides for an assured sealing interface between the cable jacket and Cold Shrink™ Jacket Tube. Mastic strips are also used to seal around an optional, external ground conductor. The Cold Shrink™ Jacket Tubes are provided in an expanded state, mounted on inner supporting plastic cores. As supplied in this prestretched condition, the tubes are ready for field installation. The jacketing tubes are made of EPDM rubber which contains no chlorides or sulfurs. Three kit sizes cover an application range of 0.95" (24 mm) to 3.62" (92 mm).

### Kit Contents:

Each kit contains the following materials to jacket one cable splice.

- 2 Cold Shrink™ Jacketing Tubes
- 2 three foot rolls of Scotch™ 2228 Rubber Mastic Tape
- 2 Mastic Strips
- 1 Profile Bushing

### Features:

Easy to install, requires only workman's

hands. Simply position each Cold Shrink™ over the Profile Bushing and unwind core toward cable as directed.

Versatile two-piece design, requires less "parking space" during installation.

Designed to fit 3M and most other manufacturers molded rubber splices.

No torches or heat required.

Seals tight, retains its resiliency and pressure even after prolonged years of aging and exposure.

Tough rubber formulation to withstand rough back filling.

Water-resistant. Meets the water seal requirements of ANSI C119.1.

Compatible with cable jackets and cable semi-conducting insulation shields.

Provides for a seal around cable ground conductor.

Resists fungus.

Resists acids and alkalis.

Resists ozone and ultraviolet light.

## 2. Applications

To jacket inline splices installed on Jacketed Concentric Neutral (JCN) Cables rated at 15, 25 and 35 kV and rated temperature of 90°C and an emergency overload rating of 130°C.

Physical protection and moisture sealing of inline splices installed on shielded power cables having solid dielectric insulation as follows:

- Polyethylene (high and low density), cross-linked
- polyethylene (XLP) and ethylene propylene rubber (EPR).

For use in indoor and outdoor installations including direct burial, aerial and submersible applications.

## A. Typical Physical and Electrical Properties

### EPDM Rubber

#### Physical Properties

Test Method	Typical Value*
• Color	Black
• 300% Modulus (ASTM D 412-75)	480 psi (3,3 MPa)
• Ultimate Tensile (ASTM D 412-75)	1400 psi (9,6 MPa)
• Ultimate Elongation (ASTM D 412-75) Original	750%
• Die C Tear (ASTM D 624C-73) Original	150 pli (38,5 KN/m)
• Fungus Resistance (ASTM G-21) 28 days exposure	No Growth
• Moisture Absorption 7 days 90°C (194°F) H <sub>2</sub> O	wt. gain 1.8%

#### Electrical Properties

Test Method	Typical Value*
• Dielectric Strength (ASTM D 149-75) Original @ 1,78 mm	365 V/mil (14,3 MV/m)
• 7 days in H <sub>2</sub> O at 90°C (194°F)	282 V/mil (11,1 MV/m)

<b>Scotch™ 2228 Rubber Mastic Tape</b>		— EPR Backing	0.030"
			(0,76 mm)
<b>Physical Properties</b>		— Mastic Layer	0.035"
			(0,89 mm)
<u>Test Method</u>	<u>Typical Value*</u>		
• Color	Black	• Adhesion to steel (ASTM D-1000)	15 lb/in (26,2 N/10 mm)
• Ultimate Elongation (ASTM D 412)	220%, min.	• Water Absorption (ASTM D-570)	0.15%
• Thickness (ASTM D-1000)			
— Overall	0.065"		
	(1,65 mm)		

### Electrical Properties

<u>Test Method</u>	<u>Typical Value*</u>
• Dielectric Strength (ASTM D-1000)	
— Dry	500 V/mil (19,6 kV/mm)
— Wet	500 V/mil (19,6 kV/mm)

\* All values are averages and are not intended for specification purposes.

### B. Cold Shrink™ Jacket Kit Selection Table

Jacket Kit	Minimum Cable Jacket O.D.	Maximum Splice O.D.	Maximum Cable Jacket Opening	3M 15 kV Splice Number	3M 25 kV Splice Number	3M 35 kV Splice Number	Approximate Parking Space Required
SJ-1SS	0.95" (24,1 mm)	1.95" (49,5 mm)	23" (584 mm)	5411 5411A 5412	—	—	19" (483 mm)
SJ-2SS	1.15" (29,2 mm)	3.00" (76,2 mm)	31" (787 mm)	5403 5404 5405 5406	5420 5421 5422 5451 5451A 5452	5432 5461	25" (552 mm)
SJ-3SS	1.55" (39,4 mm)	3.62" (91 mm)	35" (889 mm)	5407 5408 5409	5423 5424 5425 5426	5433	26" (660 mm)

NOTE: Sizing for non-3M splices should be determined by the above dimensions.

Table 1

### 3. Maintenance

Components of the 3M SJ-SS Series Cold Shrink™ Stack Sleeve Splice Jacket Kits are not impaired by freezing or overheating due to ambient

temperatures found in storage or shipping. Normal stock rotation procedures are recommended. 3M Cold

Shrink™ removable core material is polypropylene and recyclable with other  waste.

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