TS/TS 1

Certified C22.2
No. 198.2 up to 600V
UL 486 D
C US

Splicing kits for Armoured Power Cables up to 1000V

Data Sheet

1. Product Description

3M TS(Tecksplice) and TS 1(Tecksplice 1) are splicing kits to be used on Armoured Power Cables (TECK 90, AC 90, ACWU 90, RA 90 etc) up to 1KV. The splicing kits are designed for use in manholes, direct burial, cable tray etc applications
The product is CSA certified(**CSA standard C22.2 No. 198.2)** as an underground cable splice kit rated **90 C, 600V.** (CSA file number **LR84228**) for CANADA and the US.
The kits are designed to be used with SCOTCHLOK 10000, 20000 series, 3M insulated or non-insulated connectors, or any CSA certified compression connectors(C22.2 No.65-93).

2. Features:

- **Super 88** tape-premium grade, heavy duty, 8.5 mil, flame-retardant, cold and weather resistant tape.
- **2228 Mastic**-is a comformable 1KV laminated tape consisting of a rubber layer bonded to a tacky, temperature stable mastic. It is 65-mil thick for quick and easy insulating, padding and sealing of electrical splice connections rated to 1KV. The tape is designed for use on copper and aluminum conductors.
- **SS series**-copper mesh screen sleeve installs quickly with the solderless constant force spring. Used in conjunction with the 24 shielding tape to fill in the vallies in the corrugated armour provides electrical continuity for the armour.
- **Sheath Wrap**-is a strong, fiberglass knit fabric strip that has been saturated with a black urethane resin.This material is perfect for every environment including manholes, vaults, direct bury applications. Sheath Wrap is easy and fast to apply, yet hardens to a strong, maintenance-free coating.
  The fiberglass reinforced material forms a tough, durable covering that will harden in half an hour or less and fully cure in 24 hours. The cable can be energized immediately.

Sheath Wrap material is resistant to moisture, fungus, acid,alkali, ozone, sunlight, gasoline and high temperatures.The 3M Sheath Wrap material gives you the complete versatility you need. It wraps like a tape, so it fits aroundany size or shape of cable.

3. Applications:

- For inline splicing
- For armoured cables
- For cables rated 1000V or less
- For use with solid dielectric cables: XLPE, EPR, HMPE, PVC etc.
- For cable conductor size range:
  -**TS**: ***1 conductor*** -#14 AWG - 1000 KCMIL
  3, 4 conductors -#14 AWG - 4/0 KCMIL
  multiconductor cables(2-50 conductors), sizes 10 to 16 AWG
  -**TS 1**: ***3, 4 conductors*** -250 - 1000 KCMIL
- For indoor and outdoor applications:
  - cable tray
  - cable rack
  - cable hangers
  - junction box
  - wet or dry locations
  - direct burial
  - submersible

4. Kit Contents:

TS	TS 1	
1	1	Super 88(3/4"x66')
4	6	2228 Rubber Mastic Tape(2"x10')
1	1	24 shielding tape(1"x15')
3	3	Sheath Wrap (4"x15')
1	1	Sheath Wrap instructions
3	3	Gloves
1	1	SS-copper screen sleeve(4' long)
2	2	Constant force spring#4
2	2	Constant force spring#2
2	2	Constant force spring#6
1	1	Instructions

5. Testing:

The underground splicing kits were tested on representative cable samples following the CSA standard C22.2 No. 198.2 and UL standard 486 D:

Test sequence A:
- using a 14 AWG - 4 conductor TECK-90 and a 1 AWG - 3 conductor TECK-90 cable:

1. Immersion
2. Insulation resistance
3. Dielectric strength
4. Heat conditioning
5. Flexing and twisting
6. Immersion
7. Insulation resistance
8. Heat cycling
9. Insulation resistance after 25 cycles
10. Insulation resistance after 50 cycles
11. Dielectric strength
12. Leakage current

Test sequence C:
- using a 1 AWG - 3 conductor TECK-90:

1. Heat conditioning
2. Immersion
3. Insulation resistance

Test sequence D:
- using a 14 AWG - 3 conductor TECK-90 and a 1 AWG - 3 conductor TECK-90 cable:

1. Heat conditioning
2. Cold conditioning
2. Immersion
3. Dielectric strength

Test sequence for compliance with UL standard 486 D:

	Samples			
	1	**2**	**3**	**4**
Wire splice combination	4/14	4/14	3/3	4/0
Sec. 4.4	OK	OK	OK	OK
Sec. 6.3 Dielectric Strength -Withstand Test*	OK	OK	OK	OK
UL Standard 50 Sec. 36 Submersion Test(6 feet depth, 30 min)	OK	OK	OK	OK

Note: * Voltage applied between conductor and water 2200V, 60Hz

6. Maintenance:

Components within these kits are stable under normal storage conditions. Normal stock rotation practices are recommended. The Typical Physical and Electrical properties of the standard tapes included in these kits are given in their individual data sheets. If ambient temperatures are below freezing warm cable and materials to above 0 C to ensure best adhesion to cable. Recommended shelf life for the TS and TS 1 splicing kits is 3 years from date of manufacturing stamped on Sheath Wrap bag.

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