



# 3M™ Cold Shrink Sealing Kit CXS Series

## EPDM Rubber Splices for Coaxial Cable Connections

3M™ Cold Shrink Sealing Kits CXS Series offer a safe, easy way to reliably seal connections on coaxial cables. 3M™ Cold Shrink is ideal for wireless communications towers and other exposed coaxial interfaces.

Each 3M kit includes a cold shrink EPDM rubber sleeve which is factory-expanded and placed on a removable plastic core. Simply prepare the connection, position the tube and unwind the pre-scored core. The natural tendency of the rubber sleeve to return to its original diameter provides constant radial pressure, forming a reliable, water-resistant seal. All without heat, special tools or a time-consuming installation procedure. And, it's easily removed when system maintenance is required.



## Unique Benefits

3M™ Cold Shrink Sealing Kits CXS Series offer real advantages over other cable sealing methods:

- Reliable seal against water.
- Tough, resilient rubber holds pressure seal, even after exposure.
- Broad application range; can lower inventory costs.
- Eliminates need for heat source or special tools.
- Reduces installation time for sealing jobs.
- Easily removed for inspections or disconnects.
- Resistant to fungus, ozone, alkalies and acids.
- Constant radial pressure helps connectors stay together in wind and vibration.

## Applications

3M™ Cold Shrink Sealing Kits CXS Series can be used for sealing of coax cables with Type N or 7/16 DIN connectors.

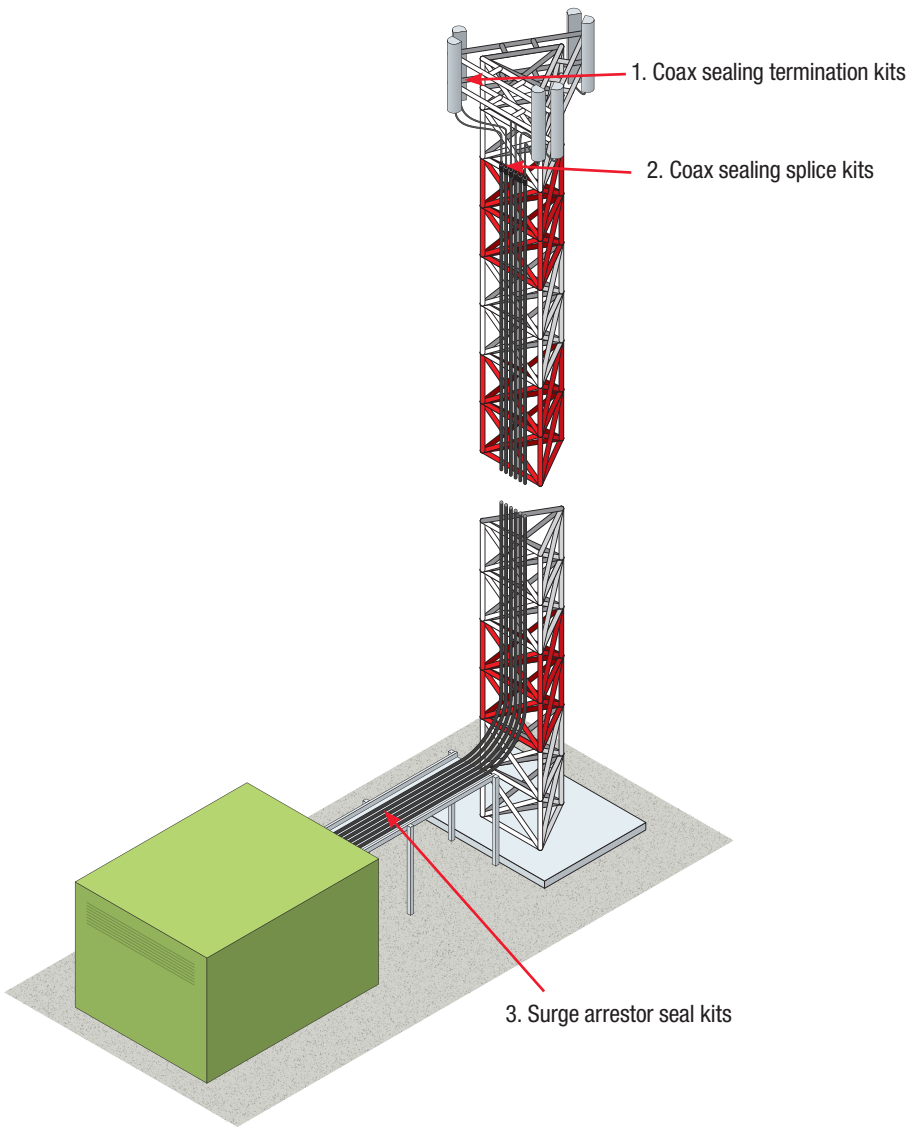
- Installation features make it the preferred coax connection seal:
- Simple installation requires only installer's hands.
- Good thermal stability.
- Excellent weathering properties.
- Excellent abrasion resistance.

## Tested Reliable

Since it was first developed by 3M over 30 years ago, 3M Cold Shrink technology has proven reliable in extreme conditions. 3M Cold Shrink has been successfully tested to the water seal requirements of ANSI Standard C119.1 and NEMA Publication No. CC-P1 (12.0" and 36.0" water depths). The 3M Cold Shrink Sealing Kit is RoHS compliant.\*



# 3M™ Cold Shrink Sealing Kit CXS Series Application



## 3M™ Cold Shrink Sealing Kit CXS Series Product Sealing of DIN and Type N Connectors

Feeder Cable		Termination*									
Jumper Cable		1/4"	3/8"	1/2"	5/8"	7/8"	1 1/4"	1 5/8"	2 1/4"		
	1/4"	CXS-1					CXS-2		CXS-3	CXS-4	
	3/8"										
	1/2"										
	5/8"										
	7/8"						w/o foam > 7/8"	w/o foam > 7/8"		CSX-2	
	1 1/4"									CSX-3	
	1 5/8"									CXS-3	
	2 1/4"										

# Specifications

## Product

3M™ Cold Shrink Coax Sealing Kits contain EPDM rubber sleeves that are applied without heat or flame. Where cable-to-connector diameter ratios dictate the need, foam strips serve as a dimensional spacer between smaller coax cables and the minimum sealing diameter of the cold shrink tubing. The cold shrink tubing assembly serves as an outer seal which seals on the O.D. of the foam strip or coax cable. The coax cable seal kit provides a moisture seal when installed on the coax cable/connector combinations listed in the “Application Chart.” It is compatible with the coax cables and N or 7/16 DIN connectors.

## Performance Tests

One of the critical characteristics for cold shrink tubing is "permanent set," which is the percentage of the tubing’s original stretched deformation not recovered in a given period of time after the deforming force (plastic support core) has been removed. 3M tests both accelerated and long-term permanent set in the product’s expanded state to see that the rubber retains sufficient elastic memory. Field experience, combined with laboratory test data, has shown that the EPDM cold shrink rubber compounds exhibit excellent long-term memory characteristics. Because the coax cable/connector is larger than the original inside diameter of the cold shrink tubing, a constant force exists between the cable and cold shrink tubing. 3M™ Cold Shrink Sealing Kits CXS Series tubing will seal within minutes at 30° F (-1° C).

### Physical Properties

Property	Value*
Color	Black
Moisture absorption Following H2O submersion 7 days @ 90°C (194°F)	Weight gain 1.8%
UV Resistance (ASTM G-53) UV Sources: UVB-313 type fluorescent lamp, exposure Time 2,000 hours	Passed+
Moisture resistance 3M TM-391	Passed

\* - Typical values, not intended for specification purposes.  
+ - No visible cracks or crazing revealed following 2,000-hour exposure.  
Rubber samples maintained more than 80% of original tensile strength.

### Application Chart

Kit Number	Sealing Application Sizes for DIN or Type N Coax Cable Connectors
CXS-1	1/4" - 7/8" Cable to 1/4" - 7/8" Cable
CXS-2	1/4" - 1 5/8" Cable to 1 1/4" - 1 5/8" Cable 1 1/4" - 1 5/8" Cable to Antenna or Surge Arrestor
CXS-3	1/4" - 2 1/4" Cable to 1 1/4" - 2 1/4" Cable 1 1/4" - 2 1/4" Cable to Antenna or Surge Arrestor
CXS-4	1/4" - 7/8" Cable to Antenna or Surge Arrestor

### Ordering Information – 3M Cold Shrink Coax Sealing Kits

Part Number	Description	Stock Number	MOQ
CXS-1	Cold Shrink Weatherproofing Kit 1/4" - 7/8" Cable to 1/4" - 7/8" Cable	80611207673	40
CXS-2	Cold Shrink Weatherproofing Kit 1/4" - 1 5/8" Cable to 1 1/4" - 1 5/8" Cable 1 1/4" - 1 5/8" Cable to Antenna or Surge Arrestor	80611207681	40
CXS-3	Cold Shrink Weatherproofing Kit 1/4" - 2 1/4" Cable to 1 1/4" - 2 1/4" Cable 1 1/4" - 2 1/4" Cable to Antenna or Surge Arrestor	80611207699	35
CXS-4	Cold Shrink Weatherproofing Kit 1/4" - 7/8" Cable to Antenna or Surge Arrestor	80611207707	40

\* RoHS : compliant with EU RoHS Directive (2005/95/EC)

"RoHS Compliant 2005/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

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