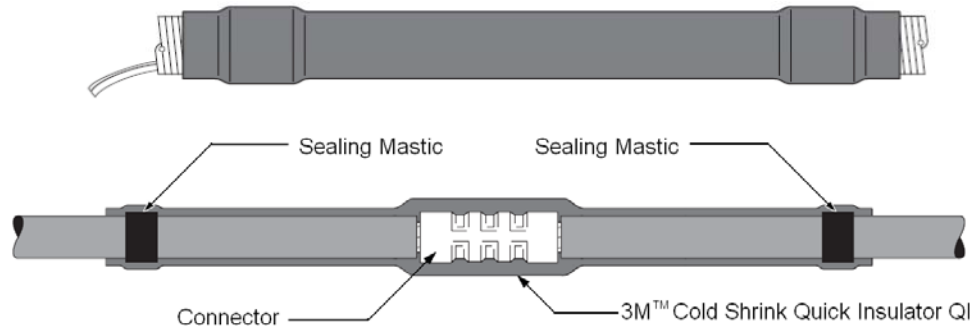


# 3M™ Cold Shrink Quick Insulator QI Series

Data Sheet

July 2015



Product Name	Typical Size Range* (AWG or kcmil)		Cable Insulation O.D. Range Inches (mm)	Max Connector O.D. Inches (mm)	Max Connector Length Inches (mm)
	Al Connector	Cu Connector			
QI-5/16-220	8 – 1/0	8 – 2/0	0.20 – 0.65 (5-16)	0.65 (16)	2.75 (70)
QI-10/37-270	2 – 500	2 – 750	0.40 – 1.45 (10-37)	1.45 (37)	4.5 (114)
QI-18/57-325	250 – 1250	250 – 1250	0.71 – 2.25 (18-57)	2.25 (57)	6.0 (152)
QI-14/70-235	4/0 – 500**	4/0 – 800**	0.50 – 2.75 (13-70)	2.75 (70)	5.0 (127)
QI-14/70-430	4/0 – 3000	4/0 – 3000	0.50 – 2.75 (13-70)	2.75 (70)	12.0 (305)
QI-6-4/0-10.5	6 – 4/0	6 – 4/0	0.23 – 1.05 (6-27)	1.05 (27)	3.5 (89)

\* Final determining factors are cable insulation O.D. and connector dimensions

\*\* Restricted by connector length.

## Description

3M™ Cold Shrink Quick Insulator QI Series are open-ended tubular rubber sleeves with sealing mastic on each end that are factory expanded and assembled onto a removable core. The core is removed by pulling from one end after the QI insulator has been positioned over an inline connector, allowing the ends of the tube to shrink and form a water-resistant seal. Sizing of the core and tube, along with the sealing mastic on each end, provides a broader application range without degrading the seal and insulating characteristics of the EPDM rubber tube. Five diameter sizes will cover a range of 1000 volts or less cable from 8 AWG through 3000 kcmil, copper and aluminum conductors with crimped connectors.

In applications where intense UV radiation will be common and visual inspection is not possible, it is recommended to overwrap the tubing with Scotch® Super 33+™ Vinyl Electrical Tape or Scotch® Self-Fusing Silicone Rubber Electrical Tape 70.

- Simple hand installation – no tools required
- No heat source – heat guns or torches – required
- Accommodates wide range of cable sizes, including street lighting
- Excellent wet electrical properties
- Good thermal stability during storage and shipping
- Seals tight, retains resiliency and pressure, even after years of aging and exposure
- Resists acids and alkalis
- Water resistant. Meets water seal requirements of ANSI C-119.1

## Agency Approvals & Self Certifications


For RoHS information, please visit [www.3M.com/ROHS](http://www.3M.com/ROHS)

## 3M™ Cold Shrink Quick Insulator QI Series

### EHS

#### **⚠ CAUTION**

Working around energized systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling electrical equipment. De-energize and ground all electrical systems.

- 3M Cold Shrink Removable Core is a mixed polymer and recyclable with waste. 
- Read all Health Hazard, Precautionary and First Aid statements found in the Safety Data Sheet (SDS) and/or product label prior to handling or use.

### Applications

- Primary electrical insulation for 8 AWG–3000 kcmil solid dielectric (rubber and plastic) insulated wire and cable splicing rated to 1000 volts, direct bury or submersible.
- Insulation of secondary splices, copper or aluminum conductors.
- Dig-in repairs.
- Sheath repairs.
- Insulation of inline conductor transition connectors and set-screw or oversized connectors.

### Typical Physical And Electrical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (~23°C) unless otherwise stated.

#### EPDM Rubber

Physical Property (Test Method)	Typical Value US units (metric)
Color	Black
300% Modulus (ASTM D 412)	480 psi (3,3 MPa)
Ultimate Tensile (ASTM D 412)	1400 psi (9,6 MPa)
Ultimate Elongation (ASTM D 412)	750%
Die C Tear (D 624C)	150 pli (26,3 KN/m)
Moisture Absorption - 7 days in H <sub>2</sub> O	Wt. Gain 1.8%

Electrical Property (Test Method)	Typical Value US units (metric)
Dielectric Strength (ASTM D 149)	365 v/mil (14,3 Kv/mm)
7 days in H <sub>2</sub> O, 90°C (194°F)	282 v/mil (11,1 Kv/mil)

## 3M™ Cold Shrink Quick Insulator QI Series

---

<b>Shelf Life &amp; Storage</b>	This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).
<b>Availability</b>	Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1.800.245.3573.

---

3M, Super 33+ and Scotch are trademarks of 3M Company.

---

<b>Important Notice</b>	All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product, which are not contained in 3M's current publications, or any contrary statements contained on your purchase order, shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.
-------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

<b>Warranty; Limited Remedy; Limited Liability</b>	This product will be free from defects in material and manufacture at the time of purchase. <b>3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.</b> If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. <b>Except where prohibited by law, 3M will not be liable for any direct, indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.</b>
----------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---



Electrical Markets Division  
6801 River Place Blvd.  
Austin, TX 78726-9000  
800.245.3573  
FAX: 800.245.0329  
www.3M.com/electrical

Please recycle  
© 3M 2015 All rights reserved  
78-8127-8709-7 Rev G