



# Vinyl Electrical Tape Super 88



LISTED  
539H Insulating Tape



LR48769

## Data Sheet

### Product Description

Scotch® Vinyl Electrical Tape Super 88 is a premium grade, 8.5-mil thick, all-weather vinyl insulating tape. It is designed to perform continuously in ambient temperatures up to 105°C (220°F). The tape is conformable for cold weather application down to -18°C (0°F). It has excellent resistance to abrasion, moisture, alkalis, acids, corrosion and varying weather conditions (including ultraviolet exposure). The combination of elastic backing and aggressive adhesive provides moisture-tight electrical and mechanical protection with minimum bulk. Super 88 Tape is an Underwriters' Laboratories Listed and Canadian Standards Association Certified "Insulating Tape".

- UL Listed; UL 510 Standard "Insulating Tape" (product category OANZ), File E129200
- CSA Certification; Standard C22.2 No. 197-M1983 "PVC Insulating Tape", File LR 48769
- Polyvinyl chloride (PVC) backing.
- Pressure-sensitive rubber-based adhesive.
- Compatible with solid dielectric cable insulations.
- Compatible with rubber and synthetic splicing compounds, as well as epoxy and polyurethane resins.
- Inhibits corrosion of electrical conductors.
- For indoor or outdoor applications.

### Applications

- Primary electrical insulation for all wire and cable splices rated up to 600 volts and 105°C (220°F).
- Primary electrical insulation for 600-volt bus applications, and protective jacketing for high- and low-voltage bus.
- Protective jacketing for high-voltage cable splices and repairs.
- Harnessing of wires and cables.

### Physical and Electrical Properties

Physical Properties	
<b>Color</b>	Black
<b>Temperature Rating:</b> UL 510	80°C (176°F)
<b>CSA</b> C22.2 No. 197-M1983 Handling Continuous Operation	-18°C (0°F) 105°C (220°F)
<b>Thickness</b> ASTM D1000	8.5 mils
<b>Adhesion to Steel</b> ASTM D1000 22°C (72°F) -18°C (0°F)	25 oz./in. 60 oz./in.
<b>Adhesion to Backing</b> ASTMD 1000 22°C (72°F) -18°C (0°F)	25 oz./in. 60 oz./in.
<b>Breaking Strength</b> ASTM D1000 22°C (72°F)	20 lbs./in.
<b>Ultimate Elongation</b> ASTM D1000 22°C (72°F) -18°C (0°F)	250% 100%
<b>Flammability (Maximum)</b> UL 510 ASTM D1000	1 sec. 4 sec.
<b>Accelerated Aging</b> ASTM D1000	80%
<b>Flagging</b> ASTM D1000	<0.1 inch
<b>Telescoping</b> 24 Hours W 50°C (120°F)	<0.1 inch

Electrical Properties	
<b>Voltage Rating</b> UL 510	600V
<b>Dielectric Breakdown</b> ASTM D1000 Standard Condition High Humidity Condition	100000 volts 90% of Standard
<b>Insulation Resistance</b> ASTM D1000 (High Humidity Method)	>1x10 <sup>6</sup> megohms

*Note: These are typical values and should not be used for specification purposes.*

## Specifications

### Product

The tape is based on polyvinyl chloride (PVC) and/or its copolymers and has a rubber-based, pressure-sensitive adhesive. The tape shall be 8.5 mils thick, and be UL Listed and marked per UL Standard 510 as "Fame Retardant, Cold and Weather Resistant." The tape must be applicable at temperatures ranging from 0°F through 100°F (-18°C through 38°C) without loss of physical properties. The tape shall be classified for use in both indoor and outdoor environments. The tape shall be compatible with synthetic cable insulations, jackets and splicing compounds. The tape will remain stable and will not telescope more than 0.1 inches when maintained at temperatures below 120°F (50°C).

### Engineering/Architectural

#### Specification

Primary electrical insulation (branch wiring in wet or dry locations): All splices for 600-volt wire rated 105°C (220°F) and below shall be insulated with a minimum of two half-lapped layers of Scotch® Vinyl Electrical Tape Super 88. All connectors having irregular surfaces shall be padded with 3M™ Scotchfil™ Electrical Insulation Putty or Scotch® Linerless Rubber Splicing Tape 130C prior to insulating with Scotch Vinyl Electrical Tape Super 88.

#### Mechanical protection (outer jacketing)

All rubber and thermoplastic insulating high voltage power cable tape splices and repairs shall be over wrapped with at least two half-lapped layers of Scotch® Vinyl Electrical Tape Super 88.

## Installation

The tape shall be applied in half-lapped layers with sufficient tension to produce a uniform wind (for most applications this tension will reduce the tape's width to approximately 5/8 of its original width). On pigtail splices, the tape shall be wrapped beyond the end of the wires and then folded back, leaving a protective cushion to resist cut-through. Wrap tape up-hill, taping from a smaller diameter surface to a larger diameter surface. Apply the tape with no tension on the last wrap to prevent flagging.

## Maintenance/Shelf Life

Scotch Vinyl Electrical Tape Super 88 has a 5-year shelf life (from date of manufacture) when stored under the following recommended storage conditions. Store behind present stock in a clean dry place at a temperature of 70°F (21°C) and 40-50% relative humidity.

## Availability

Scotch Vinyl Electrical Tape Super 88 is available from your local 3M authorized distributor in the following standard roll sizes.

¾ in. x 66 ft.

¾ in. x 44 ft.

¾ in. x 36 yd.

1-1/2 in. x 44 ft.

1-1/2 in. x 36 yd.

Other lengths and widths are available by special request.

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