



# Vinyl Electrical Tape Super 88

Data Sheet

July 2011

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## 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 applications down to -18°C (0°F). It has excellent resistance to abrasion, moisture, alkalies, acids, corrosion and varying weather conditions. The combination of elastic backing and aggressive adhesive provides moisture-tight electrical and mechanical protection with minimum bulk. Scotch® Tape Super 88 is an Underwriters' Laboratories Listed and Canadian Standards Association Certified "Insulating Tape."

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## Agency Approvals & Self Certifications

UL Listed; UL 510 Standard "Insulating Tape" (product category OANZ), File E129200

CSA Certification; Standard C22.2 No. 197-M1983 "PVC Insulating Tape," File LR48769

RoHS 2002/95/EC



RoHS Compliant 2002/95/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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## Tape Features

- 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

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## 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
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## Typical 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.

| Physical Property<br>(Test Method ASTM D-1000*)    | Typical Value<br>US units (metric)                   |
|----------------------------------------------------|------------------------------------------------------|
| Color                                              | Black                                                |
| Thickness*                                         | 8.5 mils (0,22 mm)                                   |
| Adhesion to Steel*<br>22°C (72°F)<br>-18°C (0°F)   | 28 oz./in. (3,0 N/10 mm)<br>60 oz./in. (6,5 N/10 mm) |
| Adhesion to Backing*<br>22°C (72°F)<br>-18°C (0°F) | 28 oz./in. (3,0 N/10 mm)<br>60 oz./in. (6,5 N/10 mm) |
| Breaking Strength*<br>22°C (72°F)                  | 20 lbs./in. (35 N/10 mm)                             |
| Ultimate Elongation*<br>22°C (72°F)<br>-18°C (0°F) | 250%<br>100%                                         |
| Flagging*                                          | < 0.1 in. (2,5 mm)                                   |
| Telescoping<br>24 hrs. W 50°C (120°F)              | < 0.1 in. (2,5 mm)                                   |
| Flammability (Maximum)<br>UL 510                   | Pass                                                 |

| Electrical Property<br>(Test Method ASTM D-1000*)                      | Typical Value<br>US units (metric) |
|------------------------------------------------------------------------|------------------------------------|
| Dielectric Breakdown*<br>Standard condition<br>High Humidity Condition | 10,000 volts<br>90% of Standard    |
| Insulation Resistance*<br>(High Humidity Method)                       | > 1x 10 <sup>6</sup> Megohms       |

## Product Specifications

Scotch® Vinyl Electrical Tape Super 88 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 "Flame-Retardant and Cold Resistant." The tape must be applied at temperatures ranging from 0°F through 100°F (-18°C through 38°C), without loss of physical properties. It shall be compatible with synthetic cable insulations, jackets and splicing compounds. Scotch® Tape Super 88 will remain stable and will not telescope more than 0.1 inches when maintained at temperatures below 120°F (50°C).

# Scotch® Vinyl Electrical Tape Super 88

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| <b>Engineering/<br/>Architectural<br/>Specifications</b> | <p>Primary electrical insulation (branch wiring in wet or dry locations): All splices 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 this tape.</p> <p><b>Mechanical Protection (outer jacketing)</b></p> <p>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® Tape Super 88.</p> |
| <b>Installation<br/>Techniques</b>                       | <p>Scotch® Tape Super 88 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.</p>                                                                                                                                 |
| <b>Availability</b>                                      | <p>Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1.800.245.3573.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Shelf Life &amp; Storage</b>                          | <p>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 &lt;75% relative humidity).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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## Electrical Markets Division

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

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9