



# Scotch® Vinyl Electrical Tape Super 88

Data Sheet

June 2022

**Product Description**

Scotch® Vinyl Electrical Tape Super 88 is a black, professional grade, nominal 8.5-mil (0.216 mm) thick electrical insulating tape composed of an elastic vinyl (PVC) film backing coated on one side with a non-corrosive, rubber-based pressure-sensitive adhesive.

- Commonly used in these types of applications:
  - **UL510:** As primary insulation on applications up to 600V at max temperature of 80°C (176°F) and min temperature of -10°C (14°F) on joints and splices in wires and cables in accordance with NFPA 70, National Electrical Code
  - **CSA C22.2 No.197:** As primary insulation on applications up to 1000V at max temperature of 105°C (221°F) and a min temperature of -18°C (0°F) on joints and splices in wires and cables in accordance with Canadian Electrical Code, Part 1
  - **IEC 60454-3-1:** Classification Type 7, Designation IEC 60454-3-1-7/F-PVCP/90 for thermal index of 90°C (194°F) and min temperature rating of -18°C (0°F)
- Industrial, commercial and residential environments
- Where Flame Retardant and Sunlight, Cold Resistance rating is required – UL510
- Cable jacket repair (up to 600V (UL) / 1000V (CSA) as primary insulation) and as mechanical protection when overwrapping rubber splicing, and mastic tapes used on LV/MV/HV joints and splices
- Critical indoor and outdoor operations as determined by end-user where use of a general use vinyl electrical tape is not recommended
- Where compatibility with solid dielectric cable insulations, rubber and synthetic splicing compounds is required
- Where reducing moisture ingress is needed, best results achieved when used as an overwrap in combination with a rubber splicing or mastic tape product
- For harnessing and bundling of wires and cable where faster build-up is needed
- Country of Origin: USA

**Properties**

Physical Properties	Value Imperial (Metric)	Mechanical Properties	Value Imperial (Metric)
Color – Visual	Black	Thickness <sup>3</sup>	8.5 mils +/- 0.8 (0.216 +/- 0.02 mm)
Adhesive	Rubber-based	Adhesion to Steel <sup>3</sup> - Minimum 73°F (23°C) 0°F (-18°C)	18 oz/in (2.0 N/cm) 30 oz/in (2.2 N/cm)
Backing	Vinyl (PVC)	Adhesion to Backing <sup>3</sup> - Minimum 73°F (23°C) 0°F (-18°C)	18 oz/in (2.0 N/cm) 30 oz/in (2.0 N/cm)
Flame Retardant Sunlight, Cold Resistant - UL510	Pass	Tensile Strength <sup>3,4</sup> – Minimum	2094 psi / 17.8 lb/in (31.2 N/cm)
Temperature Rating UL510 <sup>1</sup> CSA - C22.2 No. 197 <sup>2</sup> IEC 60454-3-1 - Type 7	14°F to 176°F (-10°C to 80°C) 0°F to 221°F (-18°C to 105°C) 0°F to 194°F (-18°C to 90°C)	Elongation <sup>3</sup> - Minimum 73°F (23°C) 0°F (-18°C)	225% 125%
Electrical Properties	Value Imperial (Metric)		
Voltage Rating - Maximum UL510 <sup>1</sup> / CSA C22.2 No. 197 <sup>2</sup>	600 V / 1000 V		
Dielectric Strength <sup>3</sup> - Minimum Standard Condition V/mil High Humidity	1000 V/mil (39.4 kV/mm) 90% of std.		
Insulation Resistance <sup>3</sup> - Minimum (High Humidity)	1x10 <sup>12</sup> ohms		

Notes:

1. In accordance with NFPA 70, National Electrical Code
2. In accordance with CSA C22.1, Canadian Electrical Code, Part 1
3. ASTM D1000 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated
4. Tensile Strength “lb/in (N/cm)” values for reference only, based on nominal tape thickness of 8.5 mils

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## **Agency Approvals & Self Certifications**

- UL Listed: UL 510 Standard “Insulating Tape”, Category OANZ, File No. E129200
- CSA Listed: CSA-C22.2 No.197 “PVC Insulating Tape”, File No. 048769, Class 9052-02
- VDE Mark Certificate no. 130462; Type 7: IEC 60454-3-1-7/F-PVCP/90
- Qualified Product Listed: QPL-24391 per Governing Spec MIL-I-24391C, ¾” width only
- 3M Test Report RPT-681720 available to MIL-I-24391C Standard testing
- 3M Test Report RPT-820816 available to UL510 Standard testing
  
- For Regulatory information including RoHS, REACH, please visit [www.3M.com/regs](http://www.3M.com/regs)

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## **Installation Techniques**

Scotch® Vinyl Electrical 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 width to approximately 5/8 of 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 help prevent flagging.**

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## **Shelf Life & Storage**

This product has a 5-year shelf life (from date of manufacture) when stored in humidity-controlled storage (50°F/10°C to 80°F/27°C and <75% relative humidity).

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## **Availability**

Scotch® Vinyl Electrical Tape Super 88 is available from 3M authorized distributors

Also available from [www.3M.com/electrical](http://www.3M.com/electrical) or call 1.800.245.3573.

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