



Scotch® Vinyl Electrical Tape 35

Data Sheet

June 2022

Product Description

Scotch® Vinyl Electrical Tape 35 is a professional grade, nominal 7-mil (0.178 mm) thick color-coding electrical insulating tape available in 10 colors 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 -10°C (14°F) on joints and splices in wires and cables in accordance with Canadian Electrical Code, Part 1
 - IEC 60454-3-1:** Classification Type 6, Designation IEC 60454-3-1-6/F-PVCP/90 for thermal index of 90°C (194°F) and min temperature rating of -10°C (14°F)
 - Industrial, Commercial and Residential environments
 - Where Flame Retardant and Sunlight⁵, Cold Resistance rating is required – UL510
 - Marking of safety areas and equipment and identifying cable on cell sites, phase coding, motor leads, and piping systems
 - 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
- Available in 10 fade-resistant colors, see table below
- Country of Origin: USA

Properties

Physical Properties	Value Imperial (Metric)	Mechanical Properties	Value Imperial (Metric)
Color⁵ – Visual	Blue, Brown, Gray, Green, Orange, Pink, Red, Violet, White, Yellow	Thickness³	7 mils +/- 0.7 (0.178 +/- 0.018 mm)
Adhesive	Rubber-based	Adhesion to Steel³ - Minimum 73°F (23°C)	16 oz/in (1.8 N/cm)
Backing	Vinyl (PVC)	Adhesion to Backing³ - Minimum 73°F (23°C)	16 oz/in (1.8 N/cm)
Flame Retardant Sunlight⁵, Cold Resistant - UL510	Pass ⁵	Tensile Strength^{3,4} - Minimum	2087 psi / 14.6 lb/in (25.6 N/cm)
Temperature Rating UL510 ¹ - Maximum CSA - C22.2 No. 197 ² IEC 60454-3-1 - Type 6	14°F to 176°F (-10°C to 80°C) 14°F to 221°F (-10°C to 105°C) 14°F to 194°F (-10°C to 90°C)	Elongation³ - Minimum 73°F (23°C)	125%
Electrical Properties	Value Imperial (Metric)		
Voltage Rating - Maximum UL510 ¹ / CSA C22.2 No. 197 ²	600 V / 1000 V		
Dielectric Strength³ - Minimum Standard Condition V/mil High Humidity	1000 V/mil (39.4 kV/mm) 90% of std.		
Insulation Resistance³ - Minimum (High Humidity)	1x10 ¹² ohms		

Notes:

- In accordance with NFPA 70, National Electrical Code
- In accordance with CSA C22.1, Canadian Electrical Code, Part 1
- ASTM D1000 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated
- Tensile Strength "lb/in (N/cm)" values for reference only, based on nominal tape thickness of 7 mils
- Color White is rated as UL Sunlight Resistant

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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 Marks License no. 130462 for Type 6: IEC 60454-3-1-6/F-PVC P/90
 - 3M Test Report RPT-794203 available to UL510 Standard testing
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- For Regulatory information including RoHS, REACH, please visit www.3M.com/regs
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Installation Techniques

Scotch® Vinyl Electrical Tape 35 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.**

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).

Availability

Scotch® Vinyl Electrical Tape 35 is available from 3M authorized distributors

Also available from www.3M.com/electrical or call 1.800.245.3573.

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TECHNICAL STATEMENT

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78-8124-4858-3 Rev K