

Scotch® Super 33+™ Vinyl Electrical Tape

Data Sheet

September 2020

Product Description

Scotch® Super 33+ Vinyl Electrical Tape is a 7-mil thick, premium grade all-weather vinyl insulating tape. It is designed to perform continuously in ambient temperatures up to 221°F (105°C). The tape is conformable for cold weather application down to 0°F (-18°C). It has excellent resistance to abrasion, moisture, alkalis, acids, corrosion and varying weather conditions (including UV exposure). The combination of an elastic PVC backing and aggressive pressure sensitive rubber-based adhesive provides moisture-tight electrical and mechanical protection with minimum bulk.

- Primary electrical insulation for all wire, cable splices and bus applications up to 600 volts
- Used for protective jacketing on high voltage cable splices and repairs
- Compatible with solid dielectric cable insulations
- Compatible with rubber and synthetic splicing compounds
- Compatible with epoxy and polyurethane resins
- Inhibits corrosion of electrical conductors
- For indoor and outdoor applications
- Used for harnessing and bundling of wires and cable applications

Typical Properties

Physical Properties	Typical Value ^{3,4} Imperial (Metric)	Electrical Property	Typical Value ^{3,4} Imperial (Metric)
Temperature Rating - UL 510 ¹	176°F (80°C)	Voltage Rating UL 510 ¹ CSA ²	600 V 1000 V
CSA - C22.2 No. 197 ²	0°F (-18°C) 221°F (105°C)	Dielectric Strength ⁴ Standard Condition V/mil High Humidity	1150 V/mil (45.3 kV/mm) 90% of std.
Color	Black	Insulation Resistance ⁴ (High Humidity Method)	>1x10 ⁶ megohms
Thickness ⁴	7 mils (0.178 mm)		
Adhesion to Steel ⁴ 73°F (23°C) 0°F (-18°C)	28 oz/in (3.0 N/cm) 60 oz/in (6.5 N/cm)		
Adhesion to Backing ⁴ 73°F (23°C) 0°F (-18°C)	28 oz/in (3.0 N/cm) 60 oz/in (6.5 N/cm)		
Breaking Strength ⁴ 73°F (23°C)	15 lb/in (26 N/cm)		
Elongation ⁴ 73°F (23°C) 0°F (-18°C)	250% 100%		
Flame Retardant - UL 510	Pass		

Notes:

1. In accordance with the National Electrical Code, NFPA 70
2. In accordance with Canadian Electrical Code, Part 1
3. Not for specification. Values are typical, not to be considered minimum or maximum.
4. ASTM D1000 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated

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 7: IEC 60454-3-1-7/F-PVC P/90
- Self-certified to meet Commercial Item Description: A-A-55809, Code A
- For Regulatory information including RoHS, REACH, please visit www.3M.com/regs



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Certificate of Analysis (COA)	<p>The 3M Certificate of Analysis (COA) for this product will contain the 3M specifications and test methods for the product performance attributes that the product will be supplied against. The COA must be requested at the time of purchase.</p> <p>This data sheet contains typical data and may not match the COA specifications and/or test methods that may be used for COA purposes.</p>
Installation Techniques	<p>Scotch® Super 33+ Vinyl Electrical 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 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 prevent flagging.</p>
Shelf Life & Storage	<p>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).</p>
Availability	<p>Scotch® Super 33+ Vinyl Electrical Tape is available from 3M authorized distributors</p> <p>Also available from 3M.com/electrical or call 1.800.245.3573.</p>

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