Scotch® Super 33+™ Vinyl Electrical Tape

Data Sheet November 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, alkalies, 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)
Temperature Rating - UL 510[1]	176°F (80°C)
CSA - C22.2 No. 197[2]	0°F (-18°C) 221°F (105°C)
Color	Black
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

Electrical Property	Typical Value[3,4] Imperial (Metric)
Voltage Rating UL 510[1] CSA[2]	 600 V 1000 V
Dielectric Strength[4] Standard Condition V/mil High Humidity	 1150 V/mil (45.3 kV/mm) 90% of std.
Insulation Resistance[4] (High Humidity Method)	 >1x10^6 megohms

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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Installation Techniques	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.
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® Super 33+ Vinyl Electrical Tape is available from 3M authorized distributors Also available from 3M.com/electrical or call 1.800.245.3573.

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