

3M Data Sheet

Scotch™ 33

Vinyl Electrical Tape

1. Product Description

Scotch™ 33 Electrical Tape is a quality, general purpose vinyl insulating tape. It has excellent resistance to: abrasion, moisture, alkalies, acid, copper corrosion and varying weather conditions (including sunlight). It is a polyvinyl chloride (PVC) tape that has a high electric strength, is flame retardant and conformable, and provides excellent mechanical protection with minimum bulk. It is a UL Listed "Insulating Tape".

Product features are:

- UL Listed; UL 510 Standard "Insulating Tape" (product category OANZ), File E129200
- Polyvinyl chloride (PVC) backing
- Pressure-sensitive rubber based adhesive
- Inhibits corrosion of electrical conductors
- Complies with solid electric cable insulation

2. Applications

- Primary electrical insulation for all wire and cable splices rated up to 600 volts and 105°C
- Protective jacketing for high voltage cable splices and repairs
- Harnessing of wires and cables
- For indoor and outdoor applications
- For above or below grade applications

3. Typical Properties*

Electric Strength¹	>39 KV/mm
Insulation Resistance²	>10 ⁶ MΩ
Thickness³	0.178 mm
Elongation³	200%
Backing Strength³	29.77 N/10 mm
Adhesion³	
To Steel	2.63 N/10 mm
To Backing	2.41 N/10 mm
Temperature Rating⁴	80°C
UL 510 Flame Retardant³	Yes

Flagging³ <2.54 mm

Telescoping
24 h at 50°C <2.54 mm

*These are typical properties and should not be used for specification purposes.

¹ IEC 60243

² IEC 60426

³ IEC 60454-2

⁴ UL-recognized for flame retardancy per UL 510, Product Category OANZ2, File E129200

4. Installation Techniques

The tape shall be applied in half-lapped layers with sufficient tension to conform and produce a uniform covering. In most applications, this tension will reduce the tape's width to approximately 5/8 of its original width. On pigtail splices, the tape should be wrapped beyond the end of the wires and then folded back, leaving a protective cushion to resist cut-through. Always wrap the tape "uphill", taping from a smaller diameter surface to a larger diameter surface. Apply the tape with no tension on the last wrap to prevent flagging.

5. Shelf Life

Scotch™ 33 Vinyl Electrical Tape has a 5 years shelf life (from date of manufacture) when stored under the following recommended storage conditions. Store behind present stock in a clean dry place at a temperature of 21°C and 40-50% relative humidity. Good stock rotation is recommended.

6. Availability

Scotch™ 33 Vinyl Electrical Tape is available from your local 3M authorized electrical distributor in the following standard roll sizes:

19 mm x 33 m

38 mm x 13.5 m

Other lengths and widths are available by special order.

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3M 2003
Issue: 1