

## Product Description

3M Temflex Vinyl Electrical Tape 165 is a 6-mil thick, multi-purpose flame-retardant vinyl insulating tape available in 10 colors. It is designed to perform in ambient temperatures up to 194°F (90°C). The tape is conformable for cold weather application down to 32°F (0°C). It has excellent resistance to abrasion, moisture, alkalies, acid, copper corrosion and varying weather conditions. The combination of an elastic PVC backing and pressure-sensitive rubber-based adhesive provides electrical and mechanical protection with minimum bulk.

- Suitable for moderate indoor & weather protected outdoor uses
- For residential, commercial and manufacturing (OEM) environments
- Color-coding for phase identification, wire marking and safety
- Electrical insulation for wire and cable splices rated up to 600 volts
- Harnessing and bundling of wires and cables
- Wire pulling and fishing

## Agency Approvals & Self Certifications

- UL Listed: UL 510 Standard “Insulating Tape”, Category OANZ, File No. E129200
- CSA Listed: C22.2 No.197 “PVC Insulating Tape”, File No. 048769, Class 9052-02
- For Regulatory information including RoHS, REACH, please visit [www.3M.com/regs](http://www.3M.com/regs)

## Installation Techniques

3M Temflex Vinyl Electrical Tape 165 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 a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).

## Properties

| Physical Properties                                    | Value<br>Imperial (Metric)  | Electrical Properties   | Value<br>Imperial (Metric)           |
|--|---|---|--------------------------------------|
| Temperature Rating - UL 510 <sup>1</sup>               | 176°F (80°C)  | Voltage Rating<br>UL 510 <sup>1</sup><br>CSA <sup>2</sup>                                       | 600 V<br>1000 V                      |
| Temperature Rating<br>CSA - C22.2 No. 197 <sup>2</sup> | 32°F (0°C)<br>194°F (90°C)  | Dielectric Strength <sup>3</sup> - Minimum<br>Standard Condition<br>After Humidity Conditioning | 1000 V/mil (40 kV/mm)<br>90% of std. |
| Color - Visual   | Black, Blue, Brown, Gray,<br>Green, Orange, Red, Purple,<br>White, Yellow | Insulation Resistance <sup>3</sup> - Minimum<br>(High Humidity Method)                          | 1x10 <sup>6</sup> megohms            |
| Flame Retardant - UL 510                               | Pass  |   |                                      |
| <b>Mechanical Properties</b>                           | <b>Value<br/>Imperial (Metric)</b>  |   |                                      |
| Thickness <sup>3</sup> - Nominal                       | 6 mils (0.152 mm)   |   |                                      |
| Adhesion to Steel <sup>3</sup> - Minimum               | 18 oz/in (2.0 N/cm)   |   |                                      |
| Adhesion to Backing <sup>3</sup> - Minimum             | 18 oz/in (2.0 N/cm)   |   |                                      |
| Breaking Strength <sup>3</sup> - Minimum               | 13 lb/in (23 N/cm)  |   |                                      |
| Elongation <sup>3</sup> - Nominal                      | 200%  |   |                                      |

Notes:

1. In accordance with the National Electrical Code, NFPA 70
2. In accordance with Canadian Electrical Code, Part 1
3. ASTM D1000 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated