

# 3M™ Temflex™ Vinyl Electrical Tape 165

## Data Sheet

October 2020

### 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

### 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                                                                      |                                                                                                 |                                      |
| Mechanical Properties                                  | Value<br>Imperial (Metric)                                                |                                                                                                 |                                      |
| 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

### 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)



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|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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).                                                                                                                                                                                                                                                                                                                                                                                      |
| Availability            | 3M Temflex Vinyl Electrical Tape 165 is available from 3M authorized distributors<br><br>Also available from <a href="https://www.3M.com/electrical">3M.com/electrical</a> or call 1.800.245.3573.                                                                                                                                                                                                                                                                                                                                                     |

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Electrical Markets Division

Austin, TX

Phone: 800-245-3573

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78-9237-2342-9 Rev C