

# 3M™ Temflex™ 165

## Vinyl Electrical Tape

### 1. Product description

3M™ Temflex™ 165 Vinyl Electrical Tape is a good quality, 0.15 mm thick, multi-purpose vinyl insulating tape. It has a great resistance to moisture and varying weather conditions. It is a polyvinyl chloride (PVC) that is flame-retardant and comfortable. 3M™ Temflex™ 165 Tape provides great mechanical protection with minimum bulk. It is UL listed, CSA certified and VDE certified, approved acc. IEC 60454-3-1 standard.

- ▶ 100% solvent-free manufacturing process with lower emissions\*
- ▶ More sustainable, high-quality GU vinyl electrical tapes with no VOCs (Volatile Organic Compounds)\*

\*not applicable to colour yellow-green

### 2. Applications

- ▶ Suitable for moderate indoor and weather protected outdoor uses
- ▶ For residential, commercial and manufacturing (OEM) environments
- ▶ Colour-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

### 3. Typical properties

Physical properties	Typical value
Temperature Rating <sup>1</sup> UL510	80°C
Temperature Rating <sup>2</sup> IEC60454-3-1	
Temperature Type 5 (IEC 60454-3-1-5/F-PVC P90)	0°C up to 90°C
<b>Colour</b>	Black, white, yellow, orange, red, green, blue, purple, grey, brown, yellow-green
<b>Thickness</b> (nominal)	0.15 mm
<b>Adhesion to Steel</b> <sup>2</sup> (miminal)	>2.0 N/10 mm
<b>Adhesion to Backing</b> <sup>2</sup> (miminal)	>2.0 N/10 mm
<b>Breaking Strength</b> <sup>2</sup> (miminal)	>23 N/10 mm
<b>Ultimate Elongation</b> <sup>2</sup> (nominal)	200%
<b>Flammability</b> <sup>1</sup> UL 510	Pass
<b>Low Temperature Properties</b> <sup>1</sup> Low Temperature Properties (at 0°C)	Pass

Electrical properties	Typical value
<b>Voltage Rating</b> <sup>1</sup> UL 510	600V
<b>Dielectric Breakdown</b> <sup>2</sup> Standard Condition (minimal) High Humidity	>40kV/mm >90% of Standard
<b>Insulation Resistance</b> <sup>2</sup> (minimal)	>1×10 <sup>11</sup> Ω

Properties measured at room temperature 23°C unless otherwise stated.

<sup>1</sup>UL510 Standard

<sup>2</sup>IEC60454-3-1 Standard

## 4. User information

---

### 4.1 Specifications

3M™ Temflex™ 165 Vinyl Electrical Tape is based on polyvinyl chloride (PVC) and/or its copolymers and has a rubber-based, pressure-sensitive adhesive. The tape is 0,15 mm thick, UL listed and marked per UL Standard 510 as “Flame Retardant and Cold Resistant.” The tape is applicable at temperatures ranging from 0°C through 38°C without loss of physical properties. It’s classified for use in both indoor and outdoor environments and is compatible with synthetic cable insulations, jackets and splicing compounds.

### 4.2 Installation Techniques

3M™ Temflex™ 165 Vinyl Electrical Tape should be applied in half-lapped layers with sufficient tension to produce a uniform wind (for most applications this tension will reduce the tape’s width to approximately 60 % of its original width). On pigtail splices, the tape must 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.

### 4.3 Shelf Life and Storage

This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled area (10°C to 27°C and <75 % relative humidity).

### 4.4 Agency Approvals and Self Certifications

- ▶ UL listed; UL 510 Standard “Insulating Tape” (product category OANZ), File E129200
- ▶ CSA certified; CSA-C22.2 No.197 “PVC Insulating Tape”, File LR 48769, Class 9052-02
- ▶ VDE listed and certified with VDE marks license 40051171, classified as Type 5 Tape acc. IEC60454-3-1-5/F-PVCP/90
- ▶ For RoHS information, please visit [www.3M.com/RoHS](http://www.3M.com/RoHS)

### 4.5 Availability

Please contact your local distributor.

## 5. Additional information

---

To request additional product information, see address below.

#### Important notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M’s control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user’s knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for the user’s method or application.

Values presented have been determined by standard test methods and are average values not meant to be used for specification purposes.

All questions of warranty and liability relating to 3M products are governed by the terms of the respective sale subject, where applicable, to the prevailing law.

---

#### Electrical Markets Division

3M Deutschland GmbH  
Carl-Schurz-Str.1  
41453 Neuss  
Germany

Reference: AABDD66257\_EN01  
Issue date: 14.04.2021 – Supersedes: new

Please recycle. Printed in the UK. © 3M 2021. 3M and Temflex are trademarks of 3M Company.  
All rights reserved. OMG178754

