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 Imperial (Metric)
Temperature Rating - UL 510[1]	176°F (80°C)
Temperature Rating CSA - C22.2 No. 197[2]	32°F (0°C) 194°F (90°C)
Color - Visual	Black, Blue, Brown, Gray, Green, Orange, Red, Purple, White, Yellow
Flame Retardant - UL 510	Pass
Mechanical Properties	**Value Imperial (Metric)**
Thickness[3] - Nominal	6 mils (0.152 mm)
Adhesion to Steel[3] - Minimum	18 oz/in (2.0 N/cm)
Adhesion to Backing[3] - Minimum	18 oz/in (2.0 N/cm)
Breaking Strength[3] - Minimum	13 lb/in (23 N/cm)
Elongation[3] - Nominal	200%

Electrical Properties	Value Imperial (Metric)
Voltage Rating UL 510[1] CSA[2]	 600 V 1000 V
Dielectric Strength[3] - Minimum Standard Condition After Humidity Conditioning	 1000 V/mil (40 kV/mm) 90% of std.
Insulation Resistance[3] - Minimum (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. 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

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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 Also available from 3M.com/electrical or call 1.800.245.3573.

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