

3M™ Temflex™ 175

Vinyl Electrical Tape

1. Product description

3M™ Temflex™ 175 Vinyl Electrical Tape is a premium grade, 0.18 mm thick, high-performance general-purpose flame-retardant vinyl insulating tape. It is designed to perform in ambient temperatures up to 90°C. The tape is conformable for cold weather application down to -10°C. It has excellent resistance to abrasion, moisture, alkalis, 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. 3M™ Temflex™ 175 Vinyl Electrical Tape is UL listed and CSA certified, and IEC 60454-3-1 tested.

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

2. Applications

- ▶ Suitable for moderate indoor and weather protected outdoor uses
- ▶ For residential and commercial environments
- ▶ Provides a protective jacket for high-voltage cable splices and repairs
- ▶ Electrical insulation for wire and cable splices rated up to 600 volts
- ▶ Harnessing and bundling of wires and cables

3. Typical properties

Physical properties	Typical value
Temperature Rating ¹ UL510	80°C
Temperature Rating ² IEC60454-3-1	
Temperature Type 6 (IEC 60454-3-1-6/F-PVC P90)	-10°C up to 90°C
Colour	Black
Thickness (nominal)	0.18 mm
Adhesion to Steel ² (miminal)	2.0 N/10 mm
Adhesion to Backing ² (miminal)	2.0 N/10 mm
Breaking Strength ² (miminal)	27 N/10 mm
Ultimate Elongation ² (nominal)	200%
Flammability ¹ UL 510	Pass
Low Temperature Properties ² Low Temperature Properties (at -10°C)	Pass

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

Properties measured at room temperature 23°C unless otherwise stated.
¹UL510 Standard ²IEC60454-3-1 Standard

4. User information

4.1 Specifications

3M™ Temflex™ 175 Vinyl Electrical Tape is based on polyvinyl chloride (PVC) and/or its copolymers and has a rubber-based, pressure-sensitive adhesive. The tape is 0.18 mm thick, UL listed and marked per UL Standard 510 as 'Flame Retardant and Cold Resistant.' The tape is applicable at temperatures ranging from -10°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™ 175 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
- ▶ IEC60454-3-1 tested; Temperature Type 6: IEC 60454-3-1-6/F-PVC P90, self-certified
- ▶ For RoHS information, please visit 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.

3M Electrical Markets Division

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