

## SCOTCH™ 37 SPECIFICATION GRADE VINYL ELECTRICAL TAPE

### Product Description:

Scotch™ 37 Electrical Tape is a specification grade, 8.5 mil thick vinyl electrical insulating tape. Scotch 37 is designed for utility and industrial use. It is designed to perform continuously in a temperature ambient of up to 105°C (220°F). The tape is conformable for low temperature application down to -18°C (0°F). It has excellent resistance to abrasion, moisture, alkalis, acids, corrosion and varying weather conditions (including ultraviolet exposure). The combination of elastic vinyl backing and an aggressive, securely anchored adhesive provides moisture-tight electrical and mechanical protection with minimum bulk. Scotch 37 is an Underwriters' Laboratories listed and Canadian Standards Association certified "Insulating Tape".

- UL listed; UL 510 Standard "Insulating Tape" (product category OANZ), File E129200
- CSA certification; Standard C22.2 No.197-M1983 "PVC Insulating Tape," File LR 48769
- Complies with property requirements of Federal Specification Mil-I-24391.
- Complies with property requirements of ASTM-D3005, Type II.

### Application:

- Primary electrical insulation for all wire and cable splices rated up to 600 volts and 105°C (220°F).

— Primary electrical insulation for 600 volt bus applications, and protective jacketing for low and high voltage bus.

— Protective jacketing for high voltage cable splices and repairs.

— Harnessing of wires and cables.

— Suitable for both indoor and outdoor applications.

— Suitable for both above and below grade applications.

### Typical Data:

#### A. Physical Properties

##### Temperature Rating :

**Underwriters Laboratory**  
UL 510                      80°C (176°F)

**Canadian Standards Association**  
C22.2 No. 197-M1983  
Handling                      -18°C (0°F)  
Continuous Operation      105°C (220°F)

**Color:**                      Black

**Thickness:**  
ASTM D1000                      8.5 mils

**Adhesion to Steel:**  
ASTM D1000  
22°C (72°F)                      20 oz./in.  
-18°C (0°F)                      45 oz./in.

**Adhesion to Backing:**  
ASTM D1000  
22°C (72°F)                      20 oz./in.  
-18°C (0°F)                      45 oz./in.

**Breaking Strength:**  
ASTM D1000  
22°C (72°F)                      20 lbs./in.

**Ultimate Elongation:**  
ASTM D1000  
22°C (72°F)                      225 %  
-18°C (0°F)                      100 %

**Flammability**                      (Maximum)  
ASTM D1000                      4 sec.

**Accelerated Aging**  
ASTM D1000                      80 %

**Flagging**  
ASTM D1000                      <0.1 inch

**Telescoping**  
24 Hours @ 50°C (120°F)      <0.1 inch

#### B. Electrical Properties

**Voltage Rating**  
UL 510                      600V

**Dielectric Breakdown**  
ASTM D1000                      \*  
Standard Condition              10000 volts  
High Humidity Condition      90% of  
Std. Condition

**Insulation Resistance**  
ASTM D1000                      >1 x 10<sup>6</sup>  
megohms  
( High Humidity Method )

*NOTE: These are typical values and should not be used for specification purposes.*

## Specifications:

The tape is based on polyvinyl chloride (PVC) and/or its copolymers and has a rubber-based, pressure-sensitive adhesive. The tape shall be 8.5 mils thick, and be UL listed and marked per UL Standard 510 as "Flame Retardant, Cold and Weather Resistant." The tape must be applicable at temperatures ranging from 0°F through 100°F (-18°C through 38°C) without loss of physical properties. The tape shall be classified for use in both indoor and outdoor environments. The tape shall be compatible with synthetic cable insulations, jackets and splicing compounds. The tape will remain stable and will not telescope more than 0.1 inches when maintained at temperatures below 120°F (50°C).

## Engineering/Architectural Specification:

Primary electrical insulation (branch wiring in wet or dry locations): All splices for 600 volt wire rated 105°C (220°F) and below shall be insulated with a minimum of two half-lapped layers of Scotch 37 Vinyl Electrical Tape. All connectors having irregular surfaces shall be padded with Scotchfil Electrical Insulation Putty or Scotch 130C Rubber Splicing Tape prior to insulating with Scotch 37 Tape.

Mechanical protection (outer jacketing): All rubber and thermoplastic insulating high voltage power cable tape splices and repairs shall be overwrapped with at least two half-lapped layers of Scotch 37 Vinyl Electrical Tape.

## Installation Techniques:

The tape shall 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 5/8 of its 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.

## Maintenance:

Scotch 37 Tape complies with the requirements of UL 510 for storage. When maintained under normal storage conditions the tape will remain stable and has a two year shelf-life.

## Availability:

Scotch 37 Vinyl Electrical Tape is available from your local 3M authorized distributor. It is available in a standard 3/4 in. x 66 ft. roll size. Other lengths and widths are available by special request.

### IMPORTANT NOTICE TO PURCHASER:

All statements, technical information and recommendations related to the Seller's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use. The user assumes all risks and liability whatsoever in connection with such use.

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