



Vinyl Electrical Tape Super 88

Data Sheet

March 2008

Product Description

Scotch® Vinyl Electrical Tape Super 88 is a premium grade, 8.5-mil thick, all-weather vinyl insulating tape. It is designed to perform continuously in ambient temperatures up to 105°C (220°F). The tape is conformable for cold weather applications down to -18°C (0°F). It has excellent resistance to abrasion, moisture, alkalies, acids, corrosion and varying weather conditions (including ultraviolet exposure). The combination of elastic backing and aggressive adhesive provides moisture-tight electrical and mechanical protection with minimum bulk. Scotch® Vinyl Electrical Tape Super 88 is an Underwriters' Laboratories Listed and Canadian Standards Association Certified "Insulating Tape."

Regulatory Agencies

UL Listed - UL 510 Standard "Insulating Tape" (product category OANZ), UL File No. E129200.



Maximum Operating Temperature: 80°C (176°F)

Maximum Voltage Rating: 600 volts

CSA Certified - CSA Standard C22.2, No. 197-M1983 "PVC Insulating Tape," File No. LR 48769.

Handling: -18°C (0°F)

Continuous Operation: 105°C (220°F)

Voltage Rating: 600 volts

Tape Features

- Polyvinyl chloride (PVC) backing
- Pressure-sensitive rubber-based adhesive
- Compatible with solid dielectric cable insulations
- Compatible with rubber and synthetic splicing compounds, as well as epoxy and polyurethane resins
- Inhibits corrosion of electrical conductors
- For indoor or outdoor applications

Applications

- 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 high- and low-voltage bus.
- Protective jacketing for high-voltage cable splices and repairs.
- Harnessing of wires and cables.



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

Typical Physical Properties:		ASTM Test Method
Color	Black	
Thickness	8.5 mils	D-1000
Adhesion to Steel		D-1000
22°C (72°F)	25 oz. /in.	
-18°C (0°F)	60 oz. /in.	
Adhesion to Backing		D-1000
22°C (72°F)	25 oz. /in.	
-18°C (0°F)	60 oz. /in.	
Breaking Strength		D-1000
22°C (72°F)	.20 lbs. /in.	
Ultimate Elongation		D-1000
22°C (72°F)	250%	
-18°C (0°F)	100%	
Flammability (Maximum)		
UL510	1 sec.	
D-1000	4 sec.	
Accelerated Aging	80%	D-1000
Flagging	<0.1 inch	D-1000
Telescoping		
24 hrs. W 50°C (120°F)	<0.1 inch	
Typical Electrical Properties:		
Dielectric Breakdown		D-1000
Standard Condition	10,000 volts	
High Humidity Condition	90% of Standard	
Insulation Resistance		D-1000
(High Humidity Method)	>1x10 ⁶ megohms	

Specifications – Product 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)

Specifications - Engineering/Architectural 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® Vinyl Electrical Tape Super 88. All connectors having irregular surfaces shall be padded with 3M™ Scotchfil™ Electrical Insulation Putty or Scotch® Linerless Rubber Splicing Tape 130C prior to insulating with Scotch® Vinyl Electrical Tape Super 88.

Mechanical Protection (outer jacketing)

All rubber and thermoplastic insulating high voltage power cable tape splices and repairs shall be over wrapped with at least two half-lapped layers of Scotch® Vinyl Electrical Tape Super 88.

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.

Availability

Scotch® Vinyl Electrical Tape Super 88 is available from your local 3M authorized distributor in the following standard roll sizes.

¾ in. x 44 ft. (19 mm x 13,4 m)

¾ in. x 66 ft. (19 mm x 20,1 m)

¾ in. x 36 yd. (19 mm x 32,9 m)

1 in x 36 yd (25,4 mm x 32,9 m)

2 in x 36 yd (51 mm x 32,9 m)

1-1/2 in. x 44 ft. (38 mm x 13,4 m)

1-1/2 in. x 36 yd. (38 mm x 32,9 m)

Other lengths and widths are available by special request.

Storage

Store behind present stock in a clean dry place at a temperature of 70°F (21°C) and 40-50% relative humidity.

Shelf-Life

Scotch® Vinyl Electrical Tape Super 88 has a 5-year shelf life (from date of manufacture) when stored under the above recommended storage conditions.

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