WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK

Scotch®
Super 88 Vinyl Electrical Tape
Data Sheet

Product Description

Scotch Super 88 Electrical Tape is a premium grade, 0.2mm thick, all-weather vinyl insulating tape. It is designed to perform continuously in a temperature ambient of up to 105°C (220°F). The tape is conformable for cold weather 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 backing and aggressive adhesive provides moisture-tight electrical and mechanical protection with minimum bulk. Super 88 is an Underwriters' Laboratories Listed and Canadian Standards Association Certified "Insulating Tape".

Tape Features

- Polyvinyl chloride backing.
- Pressure sensitive rubber based adhesive.
- Thickness 0.216mm.
- Dielectric breakdown 10kV.
- Cold weather pliability and adhesion.
- Flame retardant.
- Excellent abrasion and puncture resistance.
- High tensile and mechanical strengths.
- Good elongation for excellent conformability to irregular surfaces.
- Resistant to weathering, salt water, alkalis and acids.
- Inhibits corrosion of electrical conductors.
- Consistent electrical strength when wet.
- Compatible with all standard cable insulations.
- Compatible with epoxy and polyurethane resins.
- Meets BS 3924.
- UL Listed, UL 510 standard 'insulating tape' (product category OANZ) file E129200.
- CSA certification, standard C22.2 No. 197-M1983 'PVC insulating tape', file LR48769.

Applications

- Primary electrical insulation for all wire and cable splices rated up to 600 volts and 105°C.
- Forms a protective abrasion resistant cover for high voltage cable joints and terminations.
- For fixed wire joints up to 1000V.
- For harnessing wires and cables.

Data – Physical and Electrical Properties

Physical Properties

Test Method	**Typical Value***
Temperature Rating:	
UL 510	80°C (176°F)
CSA C22.2 No.197-M1983	
Handling	-18°C (0°F)
Continuous Operation	105°C (220°F)
Colour	Black
Thickness ASTM-D1000	0.2mm
Adhesion to Steel ASTM-D1000	
22°C (72°F)	2.75N/cm
-18°C (0°F)	6.6N/cm
Adhesion to Backing ASTM-D1000	
22°C (72°F)	2.75N/cm
-18°C (0°F)	6.6N/cm
Breaking Strength ASTM-D1000	
22°C (72°F)	35.5N/cm
Ultimate Elongation ASTM-D1000	
22°C (72°F)	250%
-18°C (0°F)	100%
Flammability (Maximum)	
UL 510	1 sec.
ASTM-D1000	4 sec.
Accelerated Ageing	
ASTM-D1000	80%
Flagging ASTM-D1000	<25mm
Telescoping	
24 Hours @ 50°C (120°F)	<25mm

Electrical Properties

Test Method	**Typical Value***
Voltage Rating U1510	600V
Dielectric Breakdown ASTM-D1000	
Standard Condition	10000 volts
High Humidity	90% of std.
Insulation Resistance	
ASTM-D1000	>1 x 10^6 megohms
(High Humidity Method)	

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

WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK

Scotch®
Super 88 Vinyl Electrical Tape
Data Sheet

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 -18°C through 38°C (0°F through 100°F) 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 50°C (120°F).

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 Super 88 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 Super 88 Tape. 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 Super 88 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 small diameter surface to a larger diameter surface. Apply the tape with no tension on the last wrap to prevent flagging.

Maintenance

Scotch Super 88 Tape complies with the requirements of UL 510 for storage. When maintained under normal storage conditions the tape will remain stable and has a five-year shelf-life.

WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK