



**3M** Science.  
Applied to Life.™

**Trusted by generations  
of electrical professionals.**

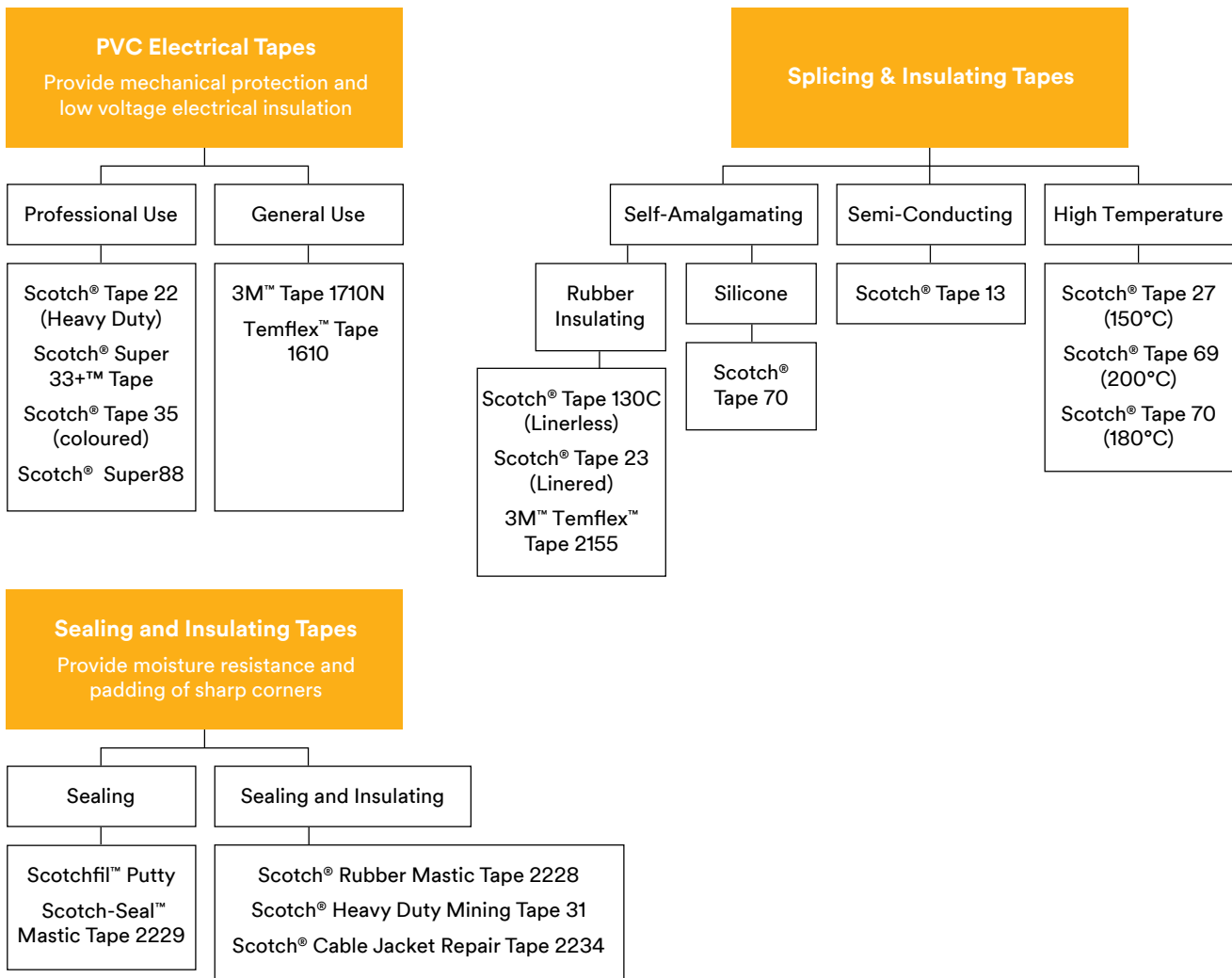
**3M™ Electrical Tapes Product Guide**

# 3M™ Electrical Tapes

3M has been developing and manufacturing high performance, easy handling electrical tapes since the 1940s. The 3M Electrical Tapes range includes tapes for low and medium voltage insulating, colour coding, moisture sealing, padding, shaping, protective jacketing, bundling, and harnessing.

## Technical Applications

- > Semi-conducting tape to reconstruct a medium voltage cable
- > Track resistant tapes for terminations
- > Fire retardant electric arc proofing tapes to protect cables from arcs and fires from nearby cable failures



## Taping Tips

**To ensure the safest, most reliable use of PVC Electrical Tapes, always:**

- > Apply tape with enough stretch to conform to the objects you're wrapping. Be sure to let the last 50 mm relax before tabbing it down to prevent unwinding (sometimes called "flagging").
- > Wrap an irregular mechanical connector, such as a split bolt, with rubber or mastic tape to pad sharp edges, before overwrapping with vinyl electrical tape.
- > Wrap tapered shapes "uphill" – that is, from the smallest to the largest point. This way you always secure the previous layer.
- > Always use scissors or a knife to cut tape. If you must tear it by hand, then keep fingers close together when tearing tape. The farther apart they are, the more the tape will stretch before it tears.
- > Use the right tape for the right conditions. Vinyl tapes are rated for cold weather application in two classes: 0°C and -18°C. Tapes formulated for high temperature environments are typically rated 80°C or 105°C. Only professional grade tapes should be used on cables rated for less than 0°C and higher than 80°C.
- > Wrap weather exposed vertical cables from the bottom up so water will run down without stopping on the tape edges









## Wrapping Tips






Type of Tape		Number of Layers/Application Instructions
Vinyl Electrical Tapes	Jacketing and Mechanical Protection	Always use a minimum of two half-lapped layers. The last layer should be wrapped in a more relaxed manner – let the last wrap relax to prevent the layer from flagging.
Rubber Tapes	Electrical Insulation, Mechanical Padding, Water Sealing and Shaping	Wrap tape tightly to achieve the watertight seal. Rubber tapes are typically overwrapped with vinyl tape.
High Voltage Tapes	Insulating and Semi-conductive Layers	Apply outside of roll to the cable, in highly stretched half-lapped layers. Never use a semi-conductive tape as an insulation.
Mastic Compounds	Insulating, Mechanical Padding, Moisture Sealing and Shaping	Overwrapping with vinyl prevents mastic flow and helps to create a watertight seal. Do not apply excessive amount of mastic to prevent oozing.

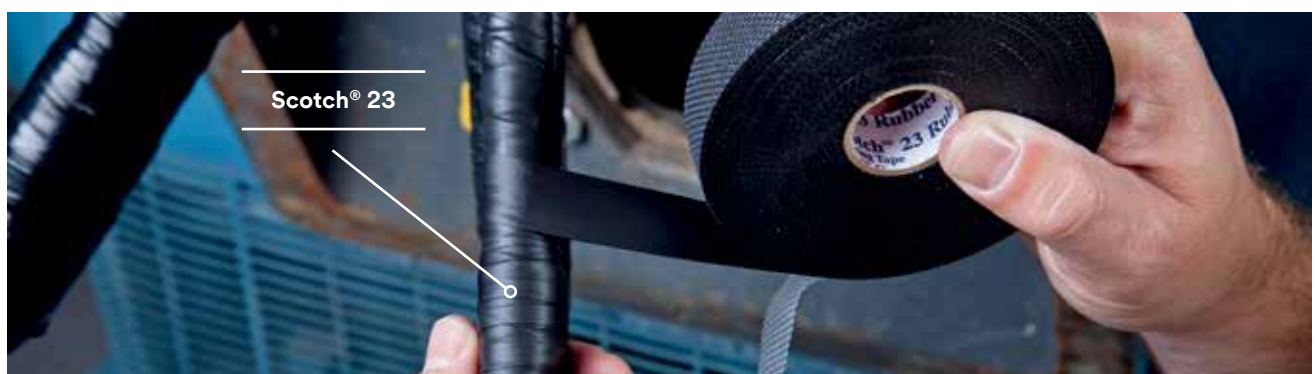


## PVC Electrical Tapes





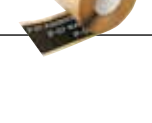
Tapes		Product Description/Applications	Thickness	Temp. Range	Roll Size
<b>Scotch® Super 33+™ Professional Grade Vinyl Electrical Tape</b>		Highly conformable, super stretchy in all weather applications; resists UV rays, abrasion, corrosion, alkalis and acids. Applications include primary insulation for splices up to 600V and protective jacketing. This tape is CSA certified and UL listed.	0.18 mm	-18°C to 105°C	19 mm x 20 m 19 mm x 33 m 25 mm x 33 m
<b>Scotch® Heavy Duty Grade Vinyl Electrical Tape Super 88</b>		All weather; heavy duty, professional use, abrasion resistant, fast build up. Applications include primary insulation for splices up to 600V and protective jacketing. This tape is CSA certified and UL listed.	0.22 mm	-18°C to 105°C	19 mm x 20 m 19 mm x 33 m 25 mm x 33 m
<b>Scotch® Professional Grade Color Coding Vinyl Electrical Tape 35</b>		Nine fade-resistant colors, super stretchy and conformable, excellent insulating properties. Resists abrasion, corrosion, alkalis and acids. Applications include harnessing, phase identification and marking. Available in a range of colours including blue, green, red, white, yellow, brown, violet, grey and pink. This tape is CSA certified and UL listed.	0.18 mm	0°C to 105°C	19 mm x 20 m
<b>Scotch® Extra Heavy Duty Grade Vinyl Electrical Tape 22</b>		Thicker for increased mechanical strength and abrasion resistance. Applications include electrical insulating, bus bar insulation and cable jacket repair. This tape is CSA certified and UL listed.	0.25 mm	-10°C to 80°C	19mm x 33 m 25 mm x 33 m 38 mm x 33 m 50 mm x 33 m
<b>3M™ Temflex™ General Purpose Vinyl Electrical Tape 1610</b>		Economical, flexible, general purpose tape with in a range of colours including white, red, blue, yellow/green, black, grey, orange and brown. Typical applications include phase identification, colour coding and harnessing.	0.15 mm	0°C to 80°C	19 mm x 20
<b>3M™ General Use PVC Electrical Tape 1710N</b>		Flexible, flame retardant, general purpose tape with good cool temperature adhesion. Available in a range of colours including white, red, blue, green, yellow, yellow/green and black. The tape is CSA certified and UL listed. Typical applications include protective jacketing, identification, colour coding, harnessing, bundling and mechanical protection.	0.18 mm	0°C to 80°C	18 mm x 20 m

## Splicing and Insulating Tapes



Tapes		Product Description/Applications	Thickness	Temp Range	Roll Size
<b>Scotch® Professional Grade Linerless Rubber Splicing Tape 130C</b>		High and low voltage insulating; thermally conductive; self-bonding. Primary electrical insulation for splicing all solid dielectric cables through 69kV.	0.76 mm	continuous: 90°C short-term: 130°C	19 mm x 9 m 25 mm x 9 m 38 mm x 9 m
<b>Scotch® Professional Grade Lined Rubber Splicing Tape 23</b>		High and low voltage insulation, self-fusing rubber tape. Primary electrical insulation for splicing all solid dielectric cables through 69kV.	0.76 mm	continuous: 90°C short-term: 130°C	19 mm x 9 m 25 mm x 9 m 38 mm x 9 m
<b>3M™ Temflex™ Rubber Splicing Tape 2155</b>		Economical low voltage rubber insulating tape; self-fusing. Insulating wire splices, split bolt connections and motor leads up to 600V.	0.76 mm	80°C	19 mm x 6.7 m
<b>Scotch® Professional Grade Semi-Conducting Tape 13</b>		Semi-conductive rubber tape. Compatible with cable semi-conducting jackets. Electrically round high voltage connections. Provide cable shield continuation.	0.76 mm	continuous: 90°C short-term: 130°C	19 mm x 4.5 m
<b>Scotch® Professional Grade Silicone Rubber Tape 70</b>		Arc and track resistant; self fusing, long lasting silicone rubber. Applications include protective overwrap for terminating high voltage cables against arcing and tracking.	0.30 mm	180°C	25 mm x 9 m
<b>Scotch® Varnished Cambric Professional Grade Tape 2510 and 2520</b>		Yellow, varnish coated cotton cloth 2510: no adhesive; 2520: adhesive. Insulate bus bars, motor leads (for re-entry), service drop connections.	2510 is 0.18 mm 2520 is 0.20 mm	105°C	<b>2510:</b> 25 mm x 33 m 50 mm x 33 m <b>2520</b> 19 mm x 18 m 19mm x 33 m 38 mm x 33 m 25 mm x 33 m 51 m x 33m
<b>Scotch® Glass Cloth Tape 27 and 69</b>		Woven insulating glass cloth; high temperature resistance; high mechanical strength. Heat-stable insulation for furnace and oven controls, motor leads and switches. Both tapes are CSA certified and UL listed.	0.177 mm	27 is class B temp (150°C) 69 is class H temp (200°C)	<b>27:</b> 12.7 mm x 20 m 19 mm x 20 m 25 mm x 55 m <b>69:</b> 12.7 mm x 33 m 19 mm x 33 m 25 mm x 33 m



## Sealing and Insulating Tapes










Tapes	Product Description/Applications	Thickness	Temp. Range	Roll Size
<b>Scotch® Professional Grade Rubber Mastic Sealing Tape 2228</b> 	Self-fusing rubber based compound bonded to a moisture sealing mastic; all weather. Insulate, pad and seal bus bar and splice connections up to 35 kV.	1.6 mm	90°C emergency overload of 130°C	25 mm x 3 m 50 mm x 3 m
<b>3M™ Scotch-Seal™ Professional Grade Mastic Sealing Tape 2229</b> 	Conformable and durable mastic. Excellent moisture and environmental seal. Sealing low and high voltage cables and accessories.	3.2 mm	90°C	25 mm x 3m 95 mm x 3 m
<b>Scotch® Cable Jacket Repair Professional Grade Tape 2234</b> 	Tough, black, abrasion and chemical-resistant backing laminated to a moisture sealing mastic for jacket repair on industrial cables.	1.5 mm	105°C	50 mm x 1.8 m
<b>3M Scotchfil® Electrical Insulation Putty</b> 	Self-fusing, insulating putty in tape form. Smooths over irregular shapes and pads sharp edges.	3.2 mm	80°C	38 mm x 1.5 m
<b>Scotch® Heavy Duty Mining Professional Grade Tape 31</b> 	Tough, abrasion-resistant backing laminated to a moisture sealing mastic for jacket repair on mining cables. MSHA-approved.	1.5 mm (60 mil)	105°C	50 mm x 2.6 m

## Corrosion Protection Tapes

Tapes	Product Description/Applications	Thickness	Temp. Range	Roll Size
<b>3M™ Scotchrap™ Professional Grade Corrosion Protection Tape 50</b> 	All-weather performance and corrosion resistance. Resistant to impact and abrasions. Corrosion protection on pipes, conduits and fittings, etc.	0.25 mm (10 mil)	80°C	25 mm x 30 m 50 mm x 30 m 100 mm x 30 m 150 mm x 30m
<b>3M™ Scotchrap™ Professional Grade Pipe Primer</b> 	Quick-dry, non-sag rubber base primer that prepares metal surfaces for tape application. For use with 3M Scotchrap tapes 50.	N/A	80°C	3.79 liters



## Special Use Tapes

Tapes		Product Description/Applications	Thickness	Temp. Range	Roll Size
<b>Scotch® Thread Sealant and Lubricant Tape 48</b>		Pipe thread sealant that provides a leak proof seal. Helps prevent cross threading on pipe threads.	0.076 mm	260°C	12.7 mm x 33 m
<b>3M™ Temflex™ Cotton Friction Tape 1755</b>		High grade friction tape. Good abrasion resistance. Abrasion protection for splices and connections. Wire bundling.	0.33 mm (13 mil)	80°C	19 mm x 18.3 m
<b>3M™ Performance Plus Duct Tape 8979</b>		Clean removal for up to 6 months outdoors. Moisture resistant. UV resistant backing for up to 1-year of outdoor exposure. Sealing, holding, bundling, reinforcing, identifying, tabbing, wrapping, paint masking, splicing and protecting.	0.31 mm (12 mil)	93°C	48 mm x 23 m 48 mm x 55 m 72 mm x 55 m
<b>3M™ Heavy Duty Duct Tape 3939</b>		Used for demanding duct tape applications. High tack adhesive for a good, quick stick to many surfaces. Conformable and moisture resistant backing that tears easily by hand. Sealing, holding, bundling, reinforcing, identifying, tabbing, wrapping, splicing and protecting.	0.22 mm (9 mil)	93°C	48 mm x 55 m
<b>3M™ VHB™ RP45 Tape</b>		Conformable, double sided, pressure sensitive, UV and water resistant with permanent bonding to most surfaces. Typical applications include washing machine touch panel, bonding, commercial vehicle roof vent attachment etc.	1.1 mm (43 mil)	Continuous 93°C and Emergency 121°C	12.7 mm x 5 m 19 mm x 5 m
<b>3M™ Aluminium Foil Tape 425</b>		Dead-soft aluminium foil backing and acrylic adhesive provide excellent heat and light reflection to protect against high temperatures and UV. Foil serves as an excellent barrier against moisture and dust. Ideal for harsh, long term outdoor environments.	0.12 mm (4.7 mil)	149°C	25 mm x 55 m 38 mm x 55 mm 50 mm x 55 m 75 mm x 55 m 96 mm x 55 m
<b>Scotch® Professional Grade Shielding Tape 24</b>		All metal open weave shielding braid, conformable, temperature stable. Applications include continuous electrostatic shielding across splice.	0.4 mm	130°C	25 mm x 4.5 m
<b>Scotch® Professional Grade Grounding Braid 25</b>		All metal woven braid; high current carrying capacity of 6 AWG wire (approx. 12 mm <sup>2</sup> ); solderable. Applications include conformable ground braid for splices and terminations.	2.38 mm	130°C	13mm x 4.5m
<b>Scotch® Fire and Electric Arc Proof Professional Grade Tape 77 Black</b>		Protects cable from arc and fire until limiting devices can interrupt faulted circuit. Use on high-energy cables that are within 500 mm of other high energy cables.	0.76 mm	-	38 mm x 6 m



**3M Australia Pty Ltd**  
**Electrical Markets Division**  
Bldg A, 1 Rivett Road  
North Ryde NSW 2113

Phone 1800 3M ELEC  
Email [3msafetyaucs@mmm.com](mailto:3msafetyaucs@mmm.com)  
Web [www.3M.com.au](http://www.3M.com.au)

**3M New Zealand Ltd**  
**Electrical Markets Division**  
94 Apollo Drive, Rosedale  
Auckland 0632

Phone 0800 474 787  
Email [3mnzitb@mmm.com](mailto:3mnzitb@mmm.com)  
Web [www.3M.com.nz](http://www.3M.com.nz)

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