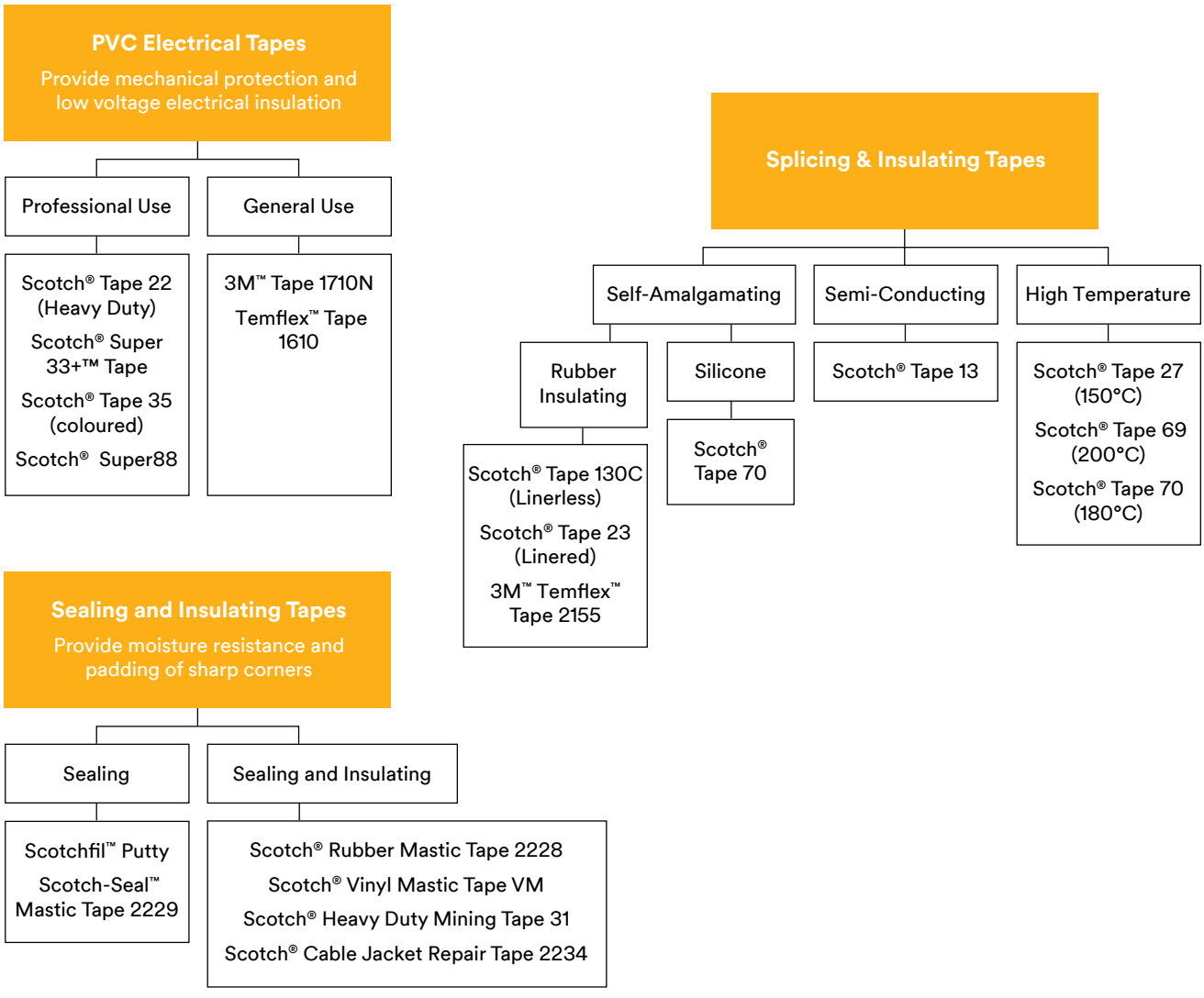
3M™ Electrical Tapes

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.