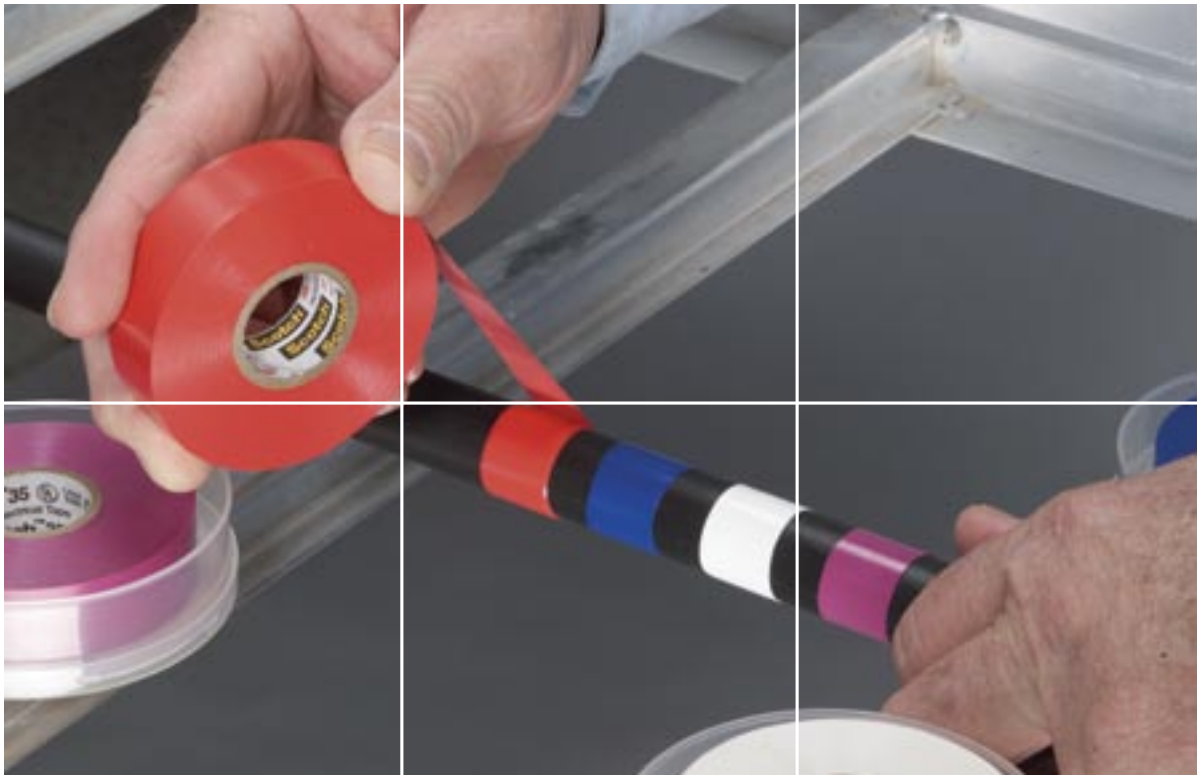
Electrical Tapes

Electrical Tapes

3M offer a range of over 30 electrical tapes and mastics for insulation, jointing, corrosion protection, all weather protection and environmental sealing tapes. From Scotch® 33+ vinyl tape to Scotch® 130C linerless rubber splicing tape to Scotch® 2200 mastic pads, 3M electrical tapes provide exceptional performance and reliability.



PVC Insulating Tape

Size	Colour
19mm x 20m	Black

Scotch® Super 33+ High Quality PVC

Scotch® Super 33+ Electrical Tape is a premium grade, 0.178mm 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). The combination of elastic backing and aggressive adhesive provides moisture-tight electrical and mechanical protection with minimum bulk.

Features

- It has excellent resistance to abrasion, moisture, alkalis, acids, corrosion and varying weather conditions (including ultraviolet exposure).
- Flame retardant
- Conforms to BS 3924 and UL510

Applications

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

PVC Insulating Tape

Sizes
19mm x 20m
25mm x 33m
38mm x 33m

Scotch® Super 88 - All Weather PVC Tape

Scotch® Super 88 Electrical Tape is a premium grade, 0.216mm thick, all-weather vinyl insulating tape). 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.

Features

- The tape is designed to perform continuously in a temperature ambient of up to 105°C (220°F) and Conformable for cold weather application down to - 18°C (0°F)
- Good elongation for excellent conformability to irregular surfaces
- Flame retardant
- Excellent abrasion and puncture resistance
- Meets BS 3924 and UL 510

Applications

- Primary electrical insulation (especially at low temperatures) for harnessing all wires and cable joints up to 600 volts and 105°C

Sizes	Colours
19mm x 20m	Red
19mm x 20m	Blue
19mm x 20m	Brown
19mm x 20m	Yellow
19mm x 20m	White

Scotch® 35 Tape - Colour Coding PVC

Scotch® 35 Vinyl Electrical Colour Coding Tape is an electrical grade, 0.178mm thick PVC tape with a pressure sensitive rubber adhesive, available in nine fade resistant colours. Roll size 19mm x 20m.

Features

- This abrasion and weather resistant tape has excellent electrical insulating properties, wraps smoothly, conforms well and holds over a wide range of temperatures. (0°C to 80°C)
- Resistant to moisture, alkalis, acids, U.V and corrosion.
- Conforms to BS 3924 and UL 510

Applications

- Scotch 35 Tape is designed for use in phase identification, Colour coding of motor leads and piping systems, and for marking safety areas
- Joint, termination and connector insulation up to 600V

Sizes
12mm x 33m
19mm x 33m
25mm x 33m
38mm x 33m
50mm x 33m

Scotch® 22 Tape - Heavy Duty PVC

Scotch® 22 Electrical Tape is a premium grade, 0.254mm thick, vinyl insulating tape. It is designed to perform continuously in ambient temperatures up to 80°C (176°F). The tape is conformable for cold weather applications down to –10°C (15°F). It has excellent resistance to abrasion, moisture, alkalis, acids, corrosion and varying weather conditions (including ultraviolet exposure).

Features

- High elastic memory
- Flame retardant
- Temperature rating from -10°C to 80°C
- High resistance to corrosion, U.V, moisture and chemicals
- Conforms to BS 3924 and UL 510

Application

- Suitable for all heavy-duty applications, including bus bar insulations, harnessing, cable sheath repair and sealing connectors

PVC Insulating Tape

Sizes
9mm x 33m
12.7mm x 33m
19mm x 33m
25mm x 33m
38mm x 33m
50mm x 33m

Scotch® 33 Tape - General Purpose PVC

Scotch® 33 Electrical Tape is a quality, 0.178mm thick, general-purpose vinyl insulating tape. It has excellent resistance to; abrasion, moisture, alkalis, acid, copper corrosion and varying weather conditions (including sunlight). It is a polyvinyl chloride (PVC) tape that has a high dielectric strength, is flame -retardant and conformable, and provides excellent mechanical protection with minimum bulk. It is a UL Listed “Insulating Tape”

Features

- Flame retardant
- Wraps and conforms easily
- Forms a protective jacket (excellent abrasion resistance for high voltage cable joints and terminations)
- Conforms to BS 3924 and UL510

Applications

- The tape is designed to perform in a continuous temperature environment up to 80°C
- Indoor or outdoor insulations (especially in moisture and solvent vapour areas) for all general purposes wiring applications and cable joints up to 600V

Sizes
19mm x 20m

Scotch® 710 - PVC Electrical Tape

Scotch® 710 Electrical Tape is a good quality, 0.178mm thick, medium purpose PVC insulating tape.

It is a polyvinyl chloride (PVC) tape that has a high dielectric strength, is conformable and provides very good mechanical protection with minimum bulk.

Features

- Excellent resistance to abrasion, moisture, alkalis, acid and varying weather conditions (including sunlight)

Applications

- Primary electrical insulation for all wire and cable joints and repairs.
- Harnessing of wire and cables.
- Indoor and outdoor applications at temperatures from -10°C to +90°C.

Sizes
19mm x 25m

Temflex™ 1500 – PVC Electrical Tape

Temflex™ 1500 Electrical Tape is a good quality, 0.15mm thick, general-purpose PVC insulating tape. Available colours are: black, blue, brown, yellow, yellow/green, grey, orange, red, white, and green.

Features

- Good resistance to abrasion, moisture, alkalis, acid and varying weather conditions (including sunlight).
- High dielectric strength, conformable and provides good mechanical protection with minimum bulk.
- Meets requirements of IEC 60454-3-1-5/F-PVCP/90 and has VDE Marks Licence

Applications

- Primary electrical insulation for all wire and cable joints and repairs.
- Harnessing of wire and cables.
- For indoor and outdoor applications.

Self Amalgamating, Insulating and Splicing Tape

Sizes
19mm x 9.15m
25mmx 9.15m
38mm x 9.15m
50mm x 9.15m

Scotch® 23 Tape - Premium Grade Self Bonding Rubber

Scotch® 23 Electrical Tape is a highly conformable 0.76mm thick, amalgamating EPR (Ethylene Propylene Rubber) based, high voltage jointing tape. It is a non-vulcanising, shelf-stable tape with excellent electrical properties. 23 Tape can be used as insulation for low-voltage applications as well as insulation for joints up to 69kV.

Features

- Physical and electrical properties are unaffected by the degree of stretch
- Can be stretched up to 100% to give void-free, moisture-resistant insulation
- Self-almalgamating tape
- Excellent electrical properties

Application

- Primary insulation for building stress cones on cables up to 35kV
- Primary electrical insulation for cable jointing and terminating up to 69kV with up to 90°C continuous operating temperatures and 130°C emergency overload temperature

Sizes
19mm x 9m
25mm x 9m
38mm x 9m
50mm x 9m

Scotch® 130C Linerless Self Bonding Tape – EPR

Scotch® 130C Electrical Tape is a highly conformable, 0.762mm thick, linerless Ethylene Propylene Rubber (EPR), high voltage insulating tape formulated to provide excellent thermal dissipation of splice heat. The tape is designed for use in splicing and terminating wires and cables.

Features

- Non-vulcanizing and highly conformable
- U.V, weather and corona resistant
- Flame retardant.
- Self-almalgamating tape

Applications

- Primary electrical insulation for cable jointing and terminating up to 69kV with up to 90°C continuous operating temperatures and 130°C emergency overload temperature
- Moisture sealing electrical connections.
- Bus bar insulations.
- End sealing high-voltage cables

Sizes
19mm x 9.15m

Temflex™ 2151 Economy Grade Self Bonding Rubber -

Temflex™ 2151 Electrical tape is a highly conformable, 0.51mm Thick, self-fusing EPR (Ethylene Propylene Rubber) based low voltage jointing tape.

Self Amalgamating, Insulating and Splicing Tape

Sizes
25mm x 9m

Scotch® 70 - Silicone Rubber Tape

Scotch® 70 Silicone Rubber Electrical Tape is a 0.3mm thick, high temperature arc-and track-resistant tape composed of self-fusing, inorganic silicone rubber and easy-tear and easy-strip liner.

Features

- Excellent track resistance
- Excellent arc resistance
- Excellent ozone resistance
- High dielectric strength
- Class “H” material (180°C continuous operation)
- Workable in extremely low temperatures
- Excellent conformability
- Excellent instantaneous fusion; does not need to be held down

Applications

- As an Over-wrap for protection of terminating high-voltage cables against arcing and tracking

Sizes
19mm x 4.5m

Scotch® 13 Tape - Semi Conducting EPR

The soft, black rubber tape is a 0.762mm thick, highly conformable, semi-conducting EPR (Ethylene Propylene Rubber) based high-voltage splicing tape. It is non-vulcanising and shelf stable, with stable conductivity over a wide temperature range. Its conductivity is not affected, except by low-viscosity oils. The conductivity of cable semi-conducting jackets is not affected by 13 Tape.

Features

- Remains stable at 130°C and is non-vulcanising
- Elongates easily to form irregular shapes
- Resist cracking, solvents, U.V and moisture
- Tape and liner boldly printed to distinguish from insulating tape
- Meets requirements of ADTM-D4388, Type IV

Application

- Electrically rounds-off high voltage connectors and lugs
- Provides screen continuation for high voltage joints and terminations
- Replaces semi-conducting layer beneath metallic shield of damaged cables
- Forms conductive portion of stress cones

Sizes
19mm x 4.5m

Scotch® 2220 - Stress Control Tape

0.762mm thick, mastic tape, for stress control applications in joints and terminations at all voltages.

Features

- Temperature rating: 90°C continuous operating with emergency overload temperature of 130°C
- Changes voltage distribution in the electrical field surrounding a high voltage termination or joint.
- Reduces stress concentration to values found in continuous cables

Applications

- Provides stress relief for all cable terminations and high voltage joints

Mastic, Sealing and Insulating Tapes

Sizes (2210 Tape)
19mm x6m
38mm x 6m
Backing and Mastic:
* Thickness 0.815mm (19x38mm rolls)
* Thickness 1.18mm (101mm rolls)

Sizes (2200 Pads)
114mm x 0.165m
Backing and Mastic:
* Thickness 3.2mm

Scotch® 2210 - Vinyl Mastic Tape
Scotch® 2200 Vinyl Mastic Pads

Scotch® Tape VM 2210 and 2200 Pads are self-fusing, rubber based insulating compounds, laminated to a flexible, all-weather grade vinyl (PVC) backing. These products are designed to insulate, moisture-seal all connections up to 600 volts, and have excellent resistance to abrasion, moisture, alkalis, acid, copper corrosion and varying weather conditions (including sunlight).

Features
- Compatible Rubber Mastic
- Flexible over wide range of temperatures
- Highly resistant to ultraviolet light
- Usable for indoor or outdoor applications

Applications (600V maximum)
- Bolted connections
- Service drops
- Traffic signal wire connections
- Lighting connections
- Transformer bushing protection

Size
50mm x 3.03m

Scotch® 2228 - Rubber Mastic Tape (EPR)

Scotch® 2228 is a 1.65mm thick, conformable self-fusing rubber electrical insulating and sealing tape. Scotch® 2228 consists of an ethylene propylene rubber (EPR) backing coated with aggressive, temperature-stable mastic adhesive. It is designed for electrical insulating and moisture sealing applications.

Features
- Conformable for application over irregular surfaces
- Compatible with solid dielectric cable insulations
- Self-fusing tape
- Flexible over wide temperature range
- Excellent weather and moisture resistance
- Excellent adhesion and sealing characteristics with copper, aluminum and power cable jacket materials

Applications
- Primary electrical insulation for cable and wire connections rated up to 1000 volts
- Primary electrical insulation for bus bar connections rated up to 35kV

Size
19mm x 1.5m

Scotch® 2221 - Mastic Tape

Scotch® 2221 Tape provides excellent oil barrier and shows good stress control characteristics. It is a 1.5mm thick, soft, self-fusing, oil resistant, elastomeric PU mastic tape on liner for medium voltage applications.

Features
- Good stress control
- Oil resistant

Applications
- Scotch® 2221 Tape is designed for use in oil barrier applications in paper, insulated MV cable joints and terminations

Mastic, Sealing and Insulating Tapes

Size
95mm x 3.08m

Scotch® 2229 - Mastic Tape

Scotch-Seal™ 2229 Mastic Tape is a 3.2mm thick, conformable, durable, tacky mastic coated on an easy release liner.
The product is designed for quick and easy insulating, padding and sealing of objects that need to be protected from adverse environmental conditions. It is well suited for corrosion protection.

Features

- Excellent adhesion and sealing characteristics to metals, rubbers, synthetic cable insulations and jackets
- Wide temperature stability while maintaining its sealing properties. (-34°C to 71°C)
- Conformable and moldable for easy applications over irregular surfaces
- Does not crack when subjected to repeated flexing
- Retains its flexibility at low temperatures resulting in ease of application and continuous performance at reduced temperatures

Applications

- For sealing high voltage cable splice and termination accessories
- For insulating electrical connections rated up to 1000 volts if over wrapped with vinyl or rubber electrical tape
- For padding irregular shaped connections
- For providing corrosion protection to a wide variety of electrical connections and applications
- For sealing ducts and cable end seals
- For sealing against dust, soil, water and other environmental conditions

Size
38mm x 1.5m

Scotchfil™ - Electrical Insulation Putty

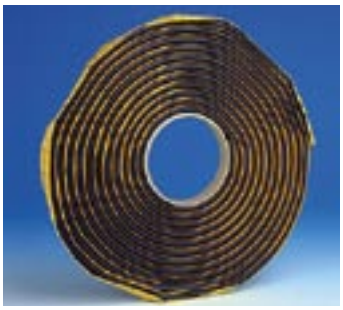
Scotchfil™ electrical insulation putty is a puttylike electrical grade compound in tape form. It is UL Recognised as a joint insulation for electrical conductors at temperatures up to 80°C (176°F) when over wrapped with either Super 33+ or Super 88 Vinyl Electrical Tape. 3.175mm thickness.

Features

- Non-corrosive, synthetic rubber
- Excellent electrical properties
- Excellent ageing properties
- Will not dry out
- Applies cleanly without waste

Applications

- To insulate low-voltage (600 volts and less) connections
- To build up cable joints and fill out major irregularities and voids in low-voltage joints (2300 volts and less) in order to obtain a uniform base for further taping
- To round out high-voltage connections to gear
- To smooth bus bar irregularities
- To create a resin dam in resin pressure joints
- To create a moisture seal at ground wire exit in high-voltage joints
- To moisture seal multi-conductor cable connections



Size	Colour
20mm x 10m	Black

Scotch-Seal™ - 5313 Preformed Sealant Strip

5313 is a tacky solid extrusion based on a synthetic rubber. High adhesive strength – sufficient to cause cohesive failure of the sealer before loss of adhesion to the substrate, when pulled with tension. The sealer is a non-curing type and retains the same properties and consistency after ageing in several different environments, including weathering.

Features

- High adhesive strength
- Excellent water / weathering resistance
- Ozone resistant
- Service temperature range -29°C to 135°C

Application

- Sealing applications in conjunction with 3M Cable Joints

General Purpose Tapes

Size
50mm x 46m

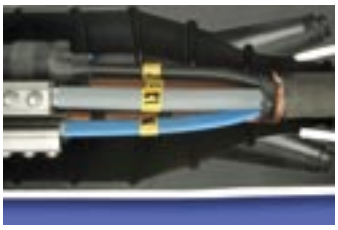
Scotch® 2000 - Duct Tape

Scotch® 2000 Electrician's Duct Tape is a 0.152mm thick, water resistant duct tape with polyvinyl chloride (PVC) backing and a rubber adhesive.
Note: This tape is not recommended for sealing air ducts

Features
- Easy tear
- No cloth – does not absorb water
- Clean removal (minimal residue)

Applications
- Scotch 2000 is designed to be an electrician's utility tape for holding and bundling applications.

Marking Tapes



Yellow	
Printed Character	Part Number
L1	SL1-R
L2	SL2-R
L3	SL3-R
N	SN-R
L	SL-R
White	
L1	SL1-RW
L2	SL2-RW
L3	SL3-RW
N	SN-RW
L	SL-RW

Scotch® 9545 Cloth Tape - Pre-printed Phase Marking

Scotch® 9545 is a heavy-duty cloth tape, pre-printed with phase marking identification characters. The tape has either a yellow or white background, with black printing. Rolls are 19mm x 10m Suitable for identification of electrical wires and cables. Tape thickness 0.27mm

Features
- Banding – a good adhesive and non-stretch strength for a reliable grip

Applications
- to assist in cable identification

White	
Printed Character	Part Number
L	T1700PL
L1	T1700PLI
L2	T1700PL2
L3	T1700PL3
N	T1700PN

Temflex™ 1700P Pre-printed Phase Marking Tape – PVC

Temflex™ PVC pre-printed with phase marking identification characters. The tape has a white background with black printing. Rolls are 15mm x 10m x 0.77mm

Features
- Flame retardent
- Operating temperature range - 10°C to 80°C

Applications
- To asist cable identification

Corrosion & Protection Tape

Sizes	
50 Tape (1)	51 Tape (2)
25mm x 30.5m	25mm x 30.5m
50mm x 30.5m	50mm x 30.5m
101mm x 30.5m	101mm x 30.5m
152mm x 30.5m	101mm x 30.5m

(1) Thickness 0.254mm
(2) Thickness 0.508mm

Scotchrap™ 50 and 51 Tape - All Weather Corrosion Protection

Scotchrap™ 50 and 51 Tapes are tough, polyvinyl chloride based tapes with special high tack adhesives formulated to resist corrosion of metal piping systems above and below ground, fittings and joints on all millcoated pipe and electrical conduit systems.

Features

- Resists abrasion, moisture, corrosive salt water, soil acids, and alkalis and salts
- Resistant to common chemicals, chemical vapours
- Resistant to outdoor weathering and sunlight
- Resistant to impact, abrasion, punctures and tears
- Both tapes have high electric strength, and excellent insulating properties.
- Continuous operating temperature range from -48°C to 80°C
- Application temperature from -12°C to 65.6°C

Applications

- Protection of metal pipe systems both above and below ground.
- Use Scotchrap Pipe primer to prepare surfaces for tape application
- Use Scotchfil Electrical Insulation putty* to build up irregular surfaces to provide a smooth, waterproof taping surface

Sizes
38mm x 6m
76mm x 6m

Scotch® 77 - Arc & Fire Proofing Tape

Scotch® 77 Tape is an arc and fireproofing tape designed to protect all types of electrical cables. Its unique formulation allows the manufacture of an unsupported elastomer that expands in fire to provide a thick char build-up between the flame and cable. This insulating firewall acts as a heat shield and flame barrier, thus protecting the cables and accessories. 0.762mm thickness

Features

- Clean and easy to apply
- Provides fault arc protection to adjacent wrapped cables
- Provides additional electrical insulation
- Resists U.V., water, salt water, acids and sewage

Applications

- To fire and arc proof high-energy power cables where exposed to failures of other high-energy cables (any cables within 45cm are considered to be exposed)
- To fire and arc proof control cables when high energy power cables are present
- To fire and arc proof all cables in areas where possibility of fire hazard exists
- To provide additional electrical insulation, thus reducing possibilities of transferred arcs
- To fire and arc proof piping systems (ie. gas, water, or oil lines)
- The installed tape to be secured with 2 layers of 69 glass cloth tape

*For information on Scotchfil Electrical Insulating Putty, see page 16

Glass Cloth Tapes

Size	Colour
12mm x 20m	White

Scotch® 27 Tape - Glass Cloth

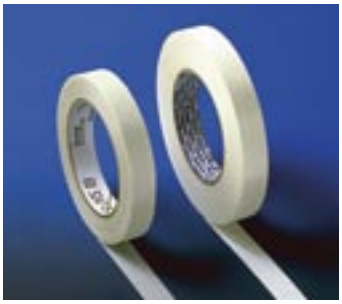
Scotch® 27 Tape is a 0.178mm thick, woven glass cloth tape designed to operate in applications requiring high mechanical strength and resistance to high temperatures. The glass cloth is specially treated and prepared to provide corrosion free protection. The adhesive is a rubber pressure-sensitive thermosetting system.

Features

- The glass will not shrink, rot or burn and has a high tensile strength.
- The tape is designed for continuous use at class "B" (130°C) temperature with a high temperature thermosetting adhesive

Applications

- Useful applications include a heat-stable insulation for furnace and oven controls, motor leads and switches.



Sizes	Colour
6mm x 33m	White
9mm x 33m	White
12mm x 33m	White
15mm x 33m	White
19mm x 33m	White
25mm x 33m	White
38mm x 33m	White
50mm x 33m	White

Scotch® Number 69 Tape - Glass Cloth Printable Film / Silicone Adhesive

69 Glass Cloth Electrical Tape is a 0.177mm thick, white glass cloth tape with a high-temperature thermosetting silicone adhesive. The thermosetting adhesive provides an increased bond once applied in areas of high ambient temperatures.

Features

- 69 Tape is UL recognized for continuous use up to 200°C.
- Meets requirements of Military Specification No. MIL-I-19166C.

Applications

- Insulating electric and induction type furnace power supply leads
- Securing high temperature, non-PSA insulations (such as asbestos and glass) in high temperature areas
- To be used in conjunction with 77 Tape* for arc and fire proofing applications

Sizes
19mm x 20m

Scotch® 2510 - Cambric Tape

Scotch® Varnished Cambric Tape is made from straight-cut woven cotton cambric fabric. The fabric is oil primed and coated with a high-grade yellow electrical insulating varnish.

The tape is flexible, electrically insulating and moisture resistant with a smooth finish.

Features

- Designed to perform continuously in temperatures up to 105°C (220°F)
- Excellent resistance to abrasion, puncture and cut-through.

Application

- For insulating joints requiring rapid and clean re-entry such as motor lead and service drop
- Connections, heavy split bolts in raceways and bus bar insulating.

*For information on 77 Tape, see page 18