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# Tapes

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In the early 1940s, vinyl plastic emerged as a highly versatile material for a wide range of applications, from shower curtains to cable insulation. Research chemists and engineers at 3M set out to create a dependable, pressure-sensitive tape made of vinyl film that would have the required electrical, physical and chemical properties. Finally, in January 1946, inventors Snell, Oace and Eastwood of 3M applied for a patent for a vinyl electrical tape. The first commercially available version of the tape was sold for use as a wire-harness wrapping. Interestingly,

this original black tape wasn't black at all. The first 3M tape sold was yellow, and later versions were white. White tape, because of its instability in ultraviolet light, was eventually replaced with black tape, although colored vinyl tapes are still used as identification and marking tapes. Black became the standard industry color for vinyl tape, primarily because of its ultraviolet resistance. 2006 marked the 60th Anniversary of Scotch® Super 33+™ Vinyl Electrical Tape, and 3M has improved the tape 16 times since its invention.

	Vinyl Tapes	Rubber Tapes	Mastic & Filler Putty Tapes	Varnish Cambric	Arc Proofing Tapes	Silicone Tapes	Glass Cloth Tapes	Mining and Jacket Repair Tapes
Protective jacketing	X				X			X
Electrical insulation	X	X	X		X	X	X	X
Moisture sealing		X	X			X		X
ID and color-coding	X							
Harness and bundling	X							
Mechanical padding		X	X			X		X
Shaping		X	X			X		
Arc proofing					X			
Connection re-entry				X		X		

## Taping Tips

Although challenging in its makeup and manufacture, vinyl electrical tape is relatively straightforward in its use. Nevertheless, to ensure the safest, most reliable use, always:

- Apply tape with enough stretch to conform to the objects you're wrapping. Be sure to let the last couple of inches 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 it with vinyl electrical tape.
- Wrap cone-shaped (high voltage splices) "uphill" — that is, from the smallest to the largest point. This way you always secure the previous layer.
- 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: 32°F (0°C) and 0°F (-18°C). Tapes formulated for high-temperature environments are typically rated 176°F (80°C) or 220°F (105°C).

## WRAPPING TIPS

TYPE OF TAPE	NUMBER OF LAYERS/APPLICATION INSTRUCTIONS
<b>Vinyl Electrical Tapes</b> — 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.
<b>Rubber Tapes</b> — Electrical Insulation, Mechanical Padding, Water Sealing and Shaping	Wrap tape tightly to achieve the watertight seal. Rubber tapes are typically overwrapped with vinyl tape.
<b>High Voltage Tapes</b> — 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.
<b>Mastic Compounds</b> — Insulating, Mechanical Padding, Moisture Sealing and Shaping	Mastic compounds are to be overwrapped with vinyl tapes to initiate flow and watertight seal. Do not apply excessive amount of mastic to prevent oozing.

# Glossary of Taping Terms

## **ADHESIVE**

The medium that allows the backing to be quickly, positively and efficiently positioned to do its job.

## **ADHESION TO BACKING**

The bond produced by contact between a pressure-sensitive adhesive and the tape backing when one piece of tape is applied to the back of another piece of the same tape.

## **BACKING**

The material that performs the tape's desired functions (insulation, protection, identification, holding).

## **CONFORMABILITY**

The ability of tape to fit snugly or make essentially complete contact with the surface of an irregular object without creasing or folding. Any tape can be applied to any surface, but it may not conform.

## **DIELECTRIC STRENGTH**

The voltage that a tape will withstand without allowing passage of current through it.

## **ELASTIC MEMORY**

A tendency of some tape backings to attempt to return to their original length after being elongated.

## **ELECTROLYTIC CORROSION FACTOR**

A measure of the tape's corrosive effect on a copper conductor. This is particularly important in the selection of tapes for use as electrical insulation.

## **ELONGATION**

The distance a tape will stretch lengthwise before breaking, expressed in a percentage. Elongation is an indication of conformability.

## **FLAGGING**

When the end of a length of tape peels away from the surface after the tape has been applied.

## **GAPPING**

Openings between layers of tape within a roll.

## **HOLIDAY**

A small defect that lowers the dielectric strength at the point of the defect.

## **MIGRATION**

The movement, over a long period of time, of an ingredient from one surface to another when the two are in contact. This may occur between tape components or between a tape and the surface to which it is applied.

## **OOZING**

A "squeezing out" of the adhesive from between the layers of tape so that the sides of the roll are very tacky.

## **PEAKING**

Large "upheavals" in the outer layers of a roll of tape, when several layers bunch and protrude outward. Creates gapping within the roll.

## **PEEL ADHESION**

The force required to pull a strip of tape from a surface at a specified angle and speed. Usually expressed in ounces per inch width.

## **PRESSURE-SENSITIVE**

A term commonly used to designate a category of adhesive tapes that, in dry (solvent-free) form, are aggressively and permanently tacky at room temperature. They also firmly adhere to a variety of dissimilar surfaces upon contact without the need of more than finger or hand pressure. Despite their aggressive tackiness, however, these tapes can be handled with the fingers and removed from smooth surfaces without leaving a residue.

## **PRIMER**

Material applied to the underside of the backing that prevents the adhesive from adhering to both sides of the backing.

## **TACKY**

A lab synonym for "sticky," or highly adhesive. Sometimes used to express the idea of pressure sensitivity.

## **TELESCOPING**

A sliding of the tape layers one over the other until the roll assumes a funnel shape.

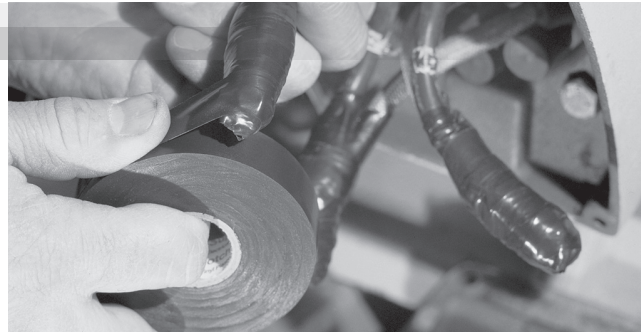
## **THERMOSETTING**

Adhesive that sets or hardens on first exposure to heat, and remains set regardless of subsequent temperature cycles.

# Vinyl Electrical Tapes

## Scotch® Super 33+™ Vinyl Electrical Tape

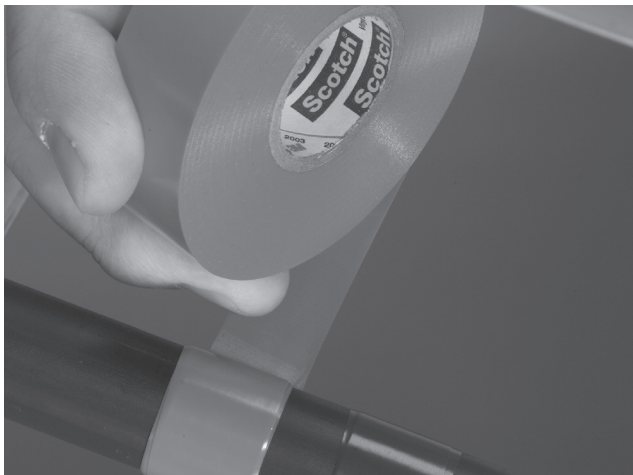
Scotch Super 33+ Vinyl Electrical Tape is a professional grade, all-weather vinyl electrical insulating tape. Super 33+ is conformable for cold weather application to 0°F (-18°C) and is designed to perform in a continuous temperature environment up to 220°F (105°C). An aggressive adhesive and elastic backing enables Super 33+ to easily conform to irregular surfaces for moisture-tight electrical and mechanical protection. Super 33+ provides flexibility and easy handling for all around performance.



Scotch® 33+ Vinyl Electrical Tape

## Scotch® Vinyl Electrical Tape 35

Scotch Vinyl Electrical Color Coding Tape 35 is a premium-grade electrical tape that stretches to conform to virtually any shape that requires color-coded insulation. Scotch 35 is abrasion- and weather-resistant, with excellent mechanical and electrical insulation properties, and wraps smoothly and holds tight over a wide range of temperatures. There are nine stay-fast colors for color-coding applications.



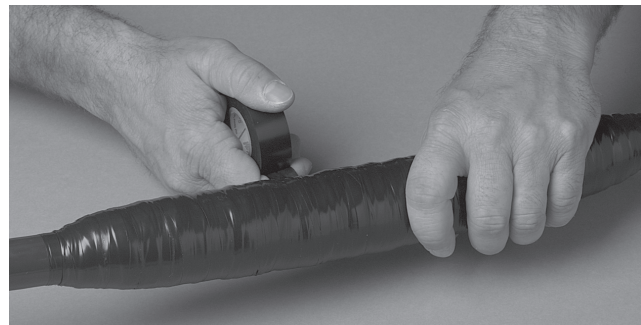
Scotch® Vinyl Electrical Tape 35

## Scotch® Vinyl Electrical Tape Super 88

Scotch Vinyl Electrical Tape Super 88 is a 8.5 mil heavy duty, premium grade all-weather vinyl electrical insulating tape. Super 88 maintains conformability for cold weather applications:



- Better mechanical/ abrasion resistance
- Quicker build-up



Scotch® Vinyl Electrical Tape Super 88



Scotch® Vinyl Electrical Tape Super 88

## Scotch® Vinyl Insulation Tape 22

Scotch Vinyl Insulation Tape 22 is one of 3M's thickest (10-mil) vinyl electrical tapes.



It is designed for insulation applications that require greater mechanical strength and abrasion resistance. Scotch 22 seals in all kinds of weather and provides moisture-tight electrical and mechanical protection with fewer wraps than thinner tapes.

## Scotch® Vinyl Electrical Tape 66R

Conformable 10-mil thick Scotch Vinyl Electrical Tape 66R is designed to perform



in a continuous temperature environment up to 220°F (105°C). It has excellent resistance to abrasion, moisture and varying weather conditions (including ultraviolet exposure). Scotch 66R, with its combination of elastic PVC backing and rubber adhesive, provides moisture-tight electrical and mechanical protection.

## 3M Electrical Tapes Training Kit

In this kit you will find supplies for the following applications:

- Insulating and wrapping a split bolt
- Insulating and wrapping a motorlead connection
- Insulating and wrapping an inline splice
- Insulating and wrapping a bus bar

Get your hands on 3M tape!

Join the 3M Training Team as they present a hands-on course for electrical tape applications.

3M, the inventor of vinyl electrical tape, wants you to have first-hand knowledge of how to properly apply tapes to split bolts, motor leads, in-line splices, bus bars and more.

**Proper training ensures:**

- More reliable installations
- Faster installations
- Better craftsmanship
- Increased confidence

Call your 3M Representative to schedule your personal hands-on session today.  
[www.3M.com/electrical](http://www.3M.com/electrical)  
 (800) 245-0329

80-6016-0213-3 **3M Innovation**

Tape Training Kit Flyer:  
80-6016-0212-3

CD:  
80-6016-0213-1

Student Kit:  
80-6114-2896-4






















## PREMIUM VINYL ELECTRICAL TAPES

FEATURES	ADVANTAGES	BENEFITS
All-weather tape design	Best adhesion and handling in all weather conditions	Makes job easier and eliminates redos
Resists weather, UV resistance, abrasion and corrosion	Long lasting	Lower maintenance cost
Far exceeds minimum agency requirements	Highest quality in product category	Provides freedom from worry

**Holds strong  
under extreme weather  
conditions**



# Specifications for Vinyl Electrical Tapes

Product Name	Product Description	Tape Thickness	U.V. Resistance	Temp. Rating	Typical Applications	Specs./ Certifications and Listings	U.S. Made
 Scotch® Super 33+™ Professional Use Premium Vinyl Electrical Tape, black	Highly conformable, super stretchy in all weather applications; resists UV rays, abrasion, corrosion.	7 mil	Exceeds UL510 requirements	221°F 105°C	Primary insulation for splices up to 600V. Protective jacketing.	A-A-55809 ASTM D-3005 Type I  RoHS	
 Scotch® Professional Use Vinyl Electrical Tape 35 for Color Coding	Nine fade-resistant colors, super stretchy and conformable, excellent insulating properties. Resists UV rays, abrasion, corrosion, alkalis and acid.	7 mil	Exceeds UL510 requirements	221°F 105°C	Phase identification and marking. Harnessing.	A-A-55809  RoHS	
 Scotch® Professional Use Premium Vinyl Electrical Tape Super 88, black	All weather; heavy duty, professional use, abrasion resistant, fast buildup.	8.5 mil	Exceeds UL510 requirements	221°F 105°C	Primary insulation for splices up to 600V. Protective jacketing.	ASTM D-3005 Type II  RoHS	
 Scotch® Heavy Duty Vinyl Electrical Tape 22, black	Thicker for increased mechanical strength and abrasion resistance. Electrical insulating.	10 mil	Exceeds UL510 requirements	176°F 80°C	Bus bar insulation. Cable jacket repair.	ASTM D-2301 Type II  RoHS	
 Scotch® Vinyl Electrical Tape 66R, black	Excellent mechanical strength, abrasion resistance and electrical insulating properties.	10 mil UL510	Exceeds 105°C requirements	221°F for 600V 105°C	Primary insulation. Protective jacketing.	 File E 17385 RoHS	
 3M™ Highland™ Commercial Grade Electrical Tape, black	Flexible, stretchy, conformable, commercial grade vinyl. Flame retardant.	7 mil	Meets UL510 requirements	194°F 90°C	Protective jacketing. Harnessing. Bundling.	ASTM D-2301 Type I  RoHS	
 3M™ Temflex™ General Purpose Vinyl Electrical Tape 1700, black	Economical, flexible, general purpose tape.	7 mil	Meets UL510 requirements	176°F 80°C	Protective jacketing. Harnessing. Bundling.	ASTM D-2301 Type I  RoHS	No
 3M™ Electrical Tape Training Kit	Supplies Include: Scotch® Super 33+, Scotch Super 88, Scotch Tape 35, Scotch 2200, Scotch 2228, Scotch Tape 70, Scotch Glass 27, Scotch 2520 and Scotch 130C. Other supplies include: split bolt, motor lead, inline splice, bus bar.	N/A	N/A	N/A	N/A	N/A	N/A

## Ordering Information for Vinyl Electrical Tapes

Product Name	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Super 33+™ Vinyl Electrical Tape, black</b>				
Super 33+	06130	3/4" x 20' (19 mm x 6,1 m)	10/box	100 rolls
Super 33+	10075	3/4" x 44' (19 mm x 13,4 m)	1/can, 10/ctn	100 rolls
Super 33+	00053	3/4" x 36 yd. (19 mm x 32,9 m)	N/A	48 rolls
Super 33+	06132	3/4" x 66' (19 mm x 20,1 m)	10/ctn	100 rolls
Super 33+Disp.	10216	3/4" x 66' (19 mm x 20,1 m)	1/disp, 10/ctn	100 rolls
Super 33+	08949	1" x 36 yd. (25,4 mm x 32,9 m)	N/A	48 rolls
Super 33+	50236	1-1/2" x 36 yd. (38 mm x 32,9 m)	N/A	50 rolls
3M™ Electrical Tape Training Kit	56308*	N/A	1 Kit	1 Kit
<b>Scotch® Vinyl Electrical Tape 35 for Color Coding</b>				
35 Blue	10240	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Blue	10836	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Brown	10299	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Brown	10885	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Gray	10281	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Gray	00072	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Green	10265	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Green	10851	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Orange	10273	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Orange	10869	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Red	10224	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Red	10810	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Violet	49923	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Violet	11271	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 White	10232	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 White	10828	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Yellow	10257	1/2" x 20' (13 mm x 6,1 m)	1/cello, 10/ctn	100 rolls
35 Yellow	10844	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
35 Multi-color Pack (Bl, Gn, Re, Ye, Wh)*	59073**	1/2" x 20' (13 mm x 6,1 m)	5 rolls/pack	60 rolls
<b>Scotch® Vinyl Electrical Tape Super 88, black</b>				
Super 88	10307	3/4" x 44' (19 mm x 13,4 m)	1/can, 10/ctn	100 rolls
Super 88	06143	3/4" x 66' (19 mm x 20,1 m)	1/can, 10/ctn	100 rolls
Super 88	10323	3/4" x 36 yd. (19 mm x 32,9 m)	1/box, 12/ctn	48 rolls
Super 88	10331	1" x 36 yd. (25,4 mm x 32,9 m)	N/A	48 rolls
Super 88	10364	1-1/2" x 44' (38 mm x 13,4 m)	1/box, 10/ctn	100 rolls
Super 88	10349	1-1/2" x 36 yd. (38 mm x 32,9 m)	N/A	12 rolls
Super 88	10356	2" x 36 yd. (51 mm x 32,9 m)	1/box	12 rolls

Note: Other widths and lengths available upon request.

## Ordering Information for Vinyl Electrical Tapes

Product Name	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Heavy-Duty Vinyl Electrical Tape 22, black</b>				
22	10026	1/2" x 36 yd. (13 mm x 32,9 m)	N/A	48 rolls
22	10034	3/4" x 36 yd. (19 mm x 32,9 m)	1/box 12/ctn	48 rolls
22	10042	1" x 36 yd. (25,4 mm x 32,9 m)	N/A	48 rolls
22	10059	1-1/2" x 36 yd. (38 mm x 32,9 m)	N/A	12 rolls
22	10067	2" x 36 yd. (51 mm x 32,9 m)	N/A	12 rolls
<b>Scotch® Vinyl Electrical Tape 66R, black</b>				
(made to order)	43249	Common Sizes: 3/4" x 36 yd. (19 mm x 32,9 m)	N/A	48 rolls
	43250	1" x 36 yd. (25,4 mm x 32,9 m) Other sizes available upon request.	N/A	36 rolls
<b>3M® Highland™ Vinyl Electrical Tape</b>				
	16720	3/4" x 66' (19 mm x 20,1 m)	1/cello	100 rolls
<b>3M® Temflex™ Vinyl Electrical Tape 1700, black</b>				
1700	49700	3/4" x 36 yd. (19 mm x 32,9 m)	1/cello, 10/sleeve	100 rolls
1700	69764	3/4" x 60' (19 mm x 18,3 m)	1/cello, 10/sleeve	100 rolls
1700	49571	3/4" x 66' (19 mm x 20,1 m)	1/cello, 10/sleeve	100 rolls
1700	43962	1" x 66' (25,4 mm x 20,1 m)	N/A	99 rolls
1700P MHS A Printed	08175	3/4" x 66' (19 mm x 20,1 m) [Bulk]	N/A	100 rolls
1700P MHS A Printed	08408	1-1/2" x 44' (38 mm x 13,4 m) [Bulk]	N/A	100 rolls
1700P MHS A Printed	50750	1-1/2" x 66' (38 mm x 20,1 m)	5 rolls/sleeve	100 rolls

Note: Other widths and lengths available upon request.

\*Minimum order quantities apply.

\*\*UPC prefix 051131-

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# Insulating and Splicing Tapes

## Scotch® Linerless Rubber Splicing Tape 130C

Scotch Electrical Tape 130C is a highly conformable, linerless Ethylene Propylene Rubber (EPR), high-voltage insulating tape that provides excellent thermal dissipation of splice heat. Scotch 130C meets industry specifications and has excellent physical and electrical properties, which helps provide immediate moisture seal and void-free buildups. Scotch 130C is rated up to 194°F (90°C) continuous operating temperatures and short-term 266°F (130°C) overload service. This tape should be applied like any rubber tape—that is, the side of the tape wrapped inside the roll should be applied outside on the splice (tacky side up). This will help prevent the roll from getting progressively further away from the work area.



Scotch® Linerless Rubber Splicing Tape 130C

(EPR)-based, high-voltage splicing tape. Scotch Electrical Tape 13 elongates easily to conform to irregular shapes and retains its conductivity when stretched.

## Scotch® Electrical Shielding Tape 24

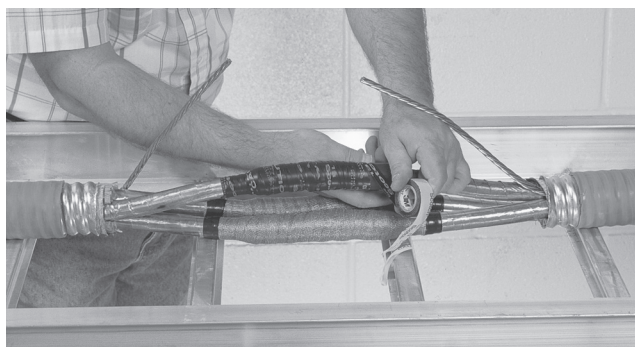
Scotch Electrical Shielding Tape 24 is an all-metal, flat, open-weave shielding braid that is compatible with power cable insulations and all high-voltage splicing and terminating materials. Scotch Electrical Shielding Tape 24 elongates easily to conform and is temperature stable.

## Scotch® Electrical Grounding Braid 25

Scotch Electrical Grounding Braid 25 is a flat, all-metal woven electrical grounding braid that is compatible with all power cable insulations and high-voltage splicing and terminating materials. The Scotch Electrical Grounding Braid 25 is conformable and temperature stable, and has a high carrying current capacity approximately that of #6 AWG wire.

## Scotch® Self-Fusing Silicone Rubber Electrical Tape 70

Scotch Self-Fusing Silicone Rubber Electrical Tape 70 is a high-temperature, arc- and track-resistant tape composed of self-fusing, inorganic silicone rubber with an easy-tear and easy-strip liner. Scotch Self-Fusing Silicone Rubber Electrical Tape 70 can be used as base tape layer to cleanly re-enter connections.



Scotch® Rubber Splicing Tape 23

## Scotch® Rubber Splicing Tape 23

Scotch Rubber Splicing Tape 23 is a highly conformable, self-fusing Ethylene Propylene Rubber (EPR)-based, high-insulating voltage tape. Scotch 23 has a “snakeskin” liner that is easily removed as the tape is applied.

## Scotch® Electrical Semi-Conducting Tape 13

Scotch Electrical Semi-Conducting Tape 13 is a highly conformable, semi-conducting Ethylene Propylene Rubber

## Scotch® Self-Fusing, Silicone Heavy Duty Triangular Electrical Tape 70HDT

Scotch® Self-Fusing, Silicone Rubber Heavy Duty Triangular Electrical Tape 70HDT is a high-temperature, arc-and-track resistant tape composed of self-fusing, silicone rubber with an easy-tear and easy-strip liner. This product is just like the Scotch® Self-Fusing Silicone Rubber Electrical Tape 70HDT, but has a triangular tapered edge profile (thicker in the middle) and a blue guideline to make half-lapping application easier.

## Scotch® Fire and Electric Arc Proofing Tape 77

Scotch Fire and Electric Arc Proofing Tape 77 is designed to protect all types of electrical cables when exposed to potential failures in an adjacent cable. Its unique formulation expands in fire to form a thick char buildup between the flame and the cable. The resulting firewall acts as a heat shield and flame barrier, thus protecting the nearby cables and accessories.

## 3M™ Linerless Splicing Compound 2242



3M Linerless Splicing Compound 2242 is a multipurpose rubber insulating tape designed for use in splicing and terminating wires and cables rated up to 194°F (90°C). 3M Linerless Splicing Compound 2242 is a highly conformable, linerless Ethylene Propylene Rubber (EPR)-based tape.

## 3M™ Scotchfil™ Electrical Insulation Putty

3M Scotchfil Putty is an electrical grade, rubber-based, elastic-type putty in tape form. It can be wrapped, stretched or molded around irregular shapes for quick, smooth insulation build-up. Use Scotchfil putty to insulate connections up to 600 volts and to round out high-voltage connections to gear, smooth bus bar irregularities, and make a moisture seal at ground wire exits in high-voltage splices. UL Recognized Component listing for 176°F (80°C) when used in combination with Super 33+ or 88 tapes (Guide OCDT2, File E59951).



## Scotch® Electrical Insulating Varnished Cambric Tape 2510 and 2520

Scotch Electrical Insulating Varnished Cambric Tape 2510 and 2520 are cotton cambric fabric tapes, oil primed and coated with high-grade yellow electrical insulating varnish for quality electrical insulating. Scotch 2510/2520 are temperature stable tape products that allow for clean re-entry of electrical connections. Scotch 2510 has no adhesive and Scotch 2520 has a pressure-sensitive adhesive.





















### LINERLESS RUBBER TAPES

FEATURES	ADVANTAGES	BENEFITS
No liner	Makes job easier	Saves time, lower installed cost
Excellent thermal dissipation	More stable splices	Provides longer cable life, reduces life cycle cost
Highly conformable	High quality moisture seal	Eliminates call-backs

### PRODUCT REFERRAL GENERATOR

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## Specifications for Insulating and Splicing Tapes

Product Name	Product Description	Tape Thickness	U.V. Resistance	Temp. Rating	Typical Applications	Specs./ Certifications and Listings	U.S. Made
 Scotch® Linerless Rubber Splicing Tape 130C	High voltage insulating; thermally conductive; self-bonding.	30 mil	No*	continuous: 194°F (90°C) short-term: 266°F (130°C)	Primary electrical insulation for splicing all solid dielectric cables through 69kV.	ASTM D-4388 Type I, II, and III HH-I-553C RoHS	
 Scotch® Electrical Semiconducting Tape 13	Rubber tape, semi-conductive. Compatible with cable semi-conducting jackets.	30 mil	No*	continuous: 194°F (90°C) short-term: 266°F (130°C)	Electrically round high voltage connections. Provide cable shield continuation.	ASTM D-4388 Type IV RoHS	
 Scotch® Rubber Splicing Tape 23	High and low voltage insulating, self-fusing rubber tape.	30 mil	N/A	continuous: 194°F (90°C) short-term: 266°F (130°C)	Primary electrical insulation for splicing all solid dielectric cables through 69kV.	HH-I-3825B ASTM D-4388 Type I, II, and III RoHS	
 Scotch® Electrical Shielding Tape 24	All metal open weave shielding braid, conformable, temperature stable.	N/A	N/A	N/A	Continue electrostatic shielding across splice.	RoHS	
 Scotch® Electrical Grounding Braid 25	All metal woven braid; high current carrying capacity of 6 AWG wire; solderable.	N/A	N/A	N/A	Conformable ground braid for splices and terminations.	RoHS	
 Scotch® Self-Fusing Silicone Rubber Electrical Tape 70	Arc and track resistant; self-fusing, long lasting silicone rubber.	12 mil	Excellent	356°F (180°C)	Protective overwrap for terminating high voltage cables.	RoHS	
 Scotch® Heavy Duty Triangular Self-Fusing Silicone Rubber Electrical Tape 70HDT	Arc and track resistant; self-fusing, long lasting silicone rubber, triangular tapered edge profile and a blue guideline.	20 mil center, 8 mil edge	Excellent	356°F (180°C)	Protective overwrap for terminating high voltage cables.	RoHS	
 Scotch® Fire and Electric Arc Proofing Tape 77	Protects cable until limiting devices can interrupt faulted current.	30 mil	Excellent	N/A	Use on high-energy cables that are within 18" of other high energy cables.	RoHS	
 3M™ Linerless Splicing Compound 2242	General purpose rubber insulating tape.	30 mil	No*	continuous: 194°F (90°C) short-term: 266°F (130°C)	All-voltage splicing, jacketing, and general insulating.	HH-I-553C ASTM D-4388 Type I, II, and III RoHS	
 3M Scotchfil™ Electrical Insulation Putty	Black, self-fusing, insulating putty in tape form.	125 mil	No*	176°F (80°C)	Insulate connections up to 600V. Smooth bus bar irregularities.	 RoHS	
 Scotch® Varnished Cambric Tape 2510 and 2520	Yellow, varnish coated cotton cloth 2510: no adhesive; 2520: adhesive.	7 mil 8 mil	No*	220°F (105°C)	Insulate bus bars, motor leads (for re-entry), service drop connections.	RoHS	
 3M™ Temflex™ Rubber Splicing Tape 2155	Replaces 2150. Economical low voltage rubber insulating tape; self-fusing.	30 mil	No*	176°F (80°C)	Insulating wire splices, split bolt connections, and motor leads up to 600V.	 RoHS	

\* For best UV protection, overwrap with Scotch® Super 33+™

## Ordering Information for Insulating and Splicing Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Linerless Rubber Splicing Tape 130C, black</b>				
130C	41717	3/4" x 30' (19 mm x 9,1 m)	1/box	24 rolls
130C	41751	1" x 10' (25 mm x 3 m)	N/A	24 rolls
130C	41752	1" x 15' (25 mm x 4,6 m)	1/box	24 rolls
130C	41753	1" x 30' (25 mm x 9,1 m)	1/box	24 rolls
130C	41718	1-1/2" x 30' (38 mm x 9,1 m)	1/box	12 rolls
130C	41754	2" x 30' (51 mm x 9,1 m)	1/box	12 rolls
<b>Scotch® Electrical Semi-Conducting Tape 13</b>				
13	15017	3/4" x 15' (19 mm x 4,57 m)	1/box, 10/ctn	50 rolls
<b>Scotch® Rubber Splicing Tape 23, black</b>				
23	15025	3/4" x 30' (19 mm x 9,1 m)	1/box, 50/ctn	50 rolls
23	13061	1" x 20' (25 mm x 6,1 m)	N/A	100 rolls
23	00059	1" x 30' (25 mm x 9,1 m)	1/box, 50/ctn	50 rolls
23	11214	1-1/2" x 30' (38 mm x 9,1 m)	1/box, 10/ctn	50 rolls
23	15033	2" x 30' (51 mm x 9,1 m)	1/box, 10/ctn	50 rolls
Note: Other widths and lengths available upon request.				
<b>Scotch® Electrical Shielding Tape 24</b>				
24	15058	1" x 100' (25 mm x 30,5 m)	1/box, 10/ctn	10 rolls
24	15041	1" x 15' (25 mm x 4,6 m)	1/box, 10/ctn	50 rolls
24	57289*	2" x 10' (51 mm x 3 m)	20/ctn	20 rolls
<b>Scotch® Electrical Grounding Braid 25</b>				
	11602	1/2" x 15' (13 mm x 4,6 m)	1/box	1 roll
<b>Scotch® Self-Fusing Silicone Rubber Electrical Tape 70, gray</b>				
	15603	1" x 30' (25 mm x 9,1 m)	1/box, 10/ctn	50 rolls
<b>Scotch® Self-Fusing, Silicone Heavy Duty Triangular Electrical Tape 70HDT</b>				
	56030*	1" x 30' (25,4 mm x 9,1 m)	1/box	50 rolls
<b>Scotch® Fire and Electric Arc Proofing Tape 77, black</b>				
77	42007	1-1/2" x 20' (38 mm x 6,1 m)	1/bag	10 rolls
77	42006	3" x 20' (76 mm x 6,1 m)	1/bag	10 rolls
77W	98374**	1-1/2" x 20' (38 mm x 6,1 m)	1/bag	10 rolls
77W	98375**	3" x 20' (76 mm x 6,1 m)	1/bag	10 rolls
<b>3M® Linerless Splicing Compound 2242, black</b>				
2242	06165	3/4" x 15' (19 mm x 4,6 m)	1/bag	24 rolls
2242	41323	1-1/2" x 15' (38 mm x 4,6 m)	1/bag	12 rolls
2242	43251	2" x 15' (51 mm x 4,6 m)	N/A	8 rolls
<b>3M® Scotchfil® Electrical Insulation Putty</b>				
	41750	1-1/2" x 60" (38 mm x 1,53 m)	4/ctn	12 rolls

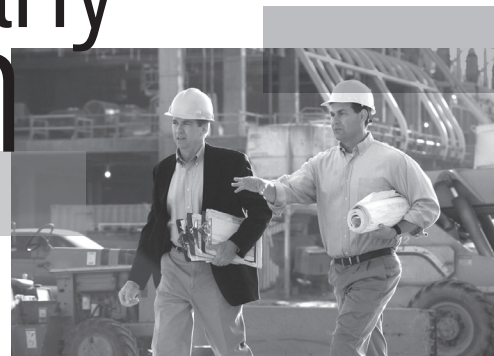
\*UPC prefix 051128-

\*\*UPC prefix 051138-

## Ordering Information for Insulating and Splicing Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Varnished Cambric Tape 2510, yellow</b>				
2510	41720	3/4" x 60' (19 mm x 18,3 m)	1/box, 10/ctn	20 rolls
2510	10661	3/4" x 36 yd. (19 mm x 33 m)	N/A	48 rolls
2510	10687	1" x 36 yd. (25 mm x 33 m)	N/A	36 rolls
2510	10703	1-1/2" x 36 yd. (38 mm x 33 m)	N/A	24 rolls
2510	10711	2" x 36 yd. (51 mm x 33 m)	N/A	16 rolls
2510	15751	36" x 25 yd. (914,4 mm x 22,9 m)	N/A	1 roll
<b>Scotch® Varnished Cambric Tape 2520, yellow</b>				
2520	04836	3/4" x 60' (19 mm x 18,3 m)	1/box, 10/ctn	20 rolls
2520	04835	3/4" x 36 yd. (19 mm x 33 m)	N/A	48 rolls
2520	04833	1" x 36 yd. (25 mm x 33 m)	N/A	36 rolls
2520	04832	1-1/2" x 36 yd. (38 mm x 33 m)	N/A	24 rolls
2520	04834	2" x 36 yd. (51 mm x 33 m)	N/A	16 rolls
<b>3M™ Temflex™ Rubber Splicing Tape 2155, black</b>				
2155 (replaces 2150)	50348	3/4" x 22' (19 mm x 6,7 m)	N/A	50 rolls
2155 (replaces 2150)	50349	1-1/2" x 22' (38 mm x 6,7 m)	N/A	45 rolls

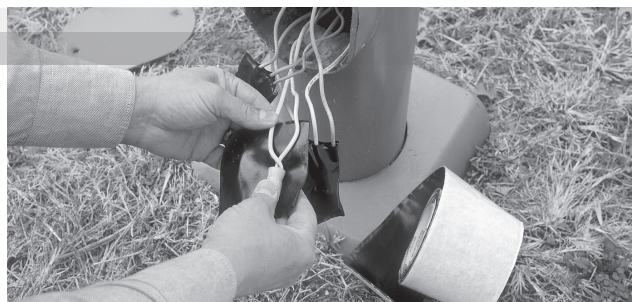
Conforms  
to any  
situation



# Sealing and Insulating Mastic Tapes

## Scotch® Vinyl Mastic Pads 2200 (125 mil) and Scotch® Vinyl Mastic Roll 2210 (90 mil)

Scotch Vinyl Mastic Pads 2200 and Scotch Vinyl Mastic Rolls 2210 are self-fusing, rubber-based insulating compounds laminated to a flexible, all-weather grade PVC backing. Both rolls and pads are resistant to abrasion, moisture, alkalis, acid, copper corrosion, UV and varying weather conditions.



Scotch® 2210 Vinyl Mastic Roll

## Scotch® Electrical Moisture Sealant (45 mil) 06147 and 06149

Scotch Electrical Moisture Sealant 06147 and 06149 are self-fusing, rubber-based thin insulating mastic compounds laminated to a flexible, all-weather grade PVC backing and are designed for moisture sealing of electrical connections up to 600 volts.



## Scotch® Rubber Mastic Tape 2228

Scotch Rubber Mastic Tape 2228 is a conformable self-fusing rubber electrical insulating and sealing tape. Scotch® Rubber Mastic 2228 consists of Ethylene Propylene rubber (EPR) backing coated with a strong, temperature-stable mastic adhesive.



## 3M™ Scotch-Seal™ Mastic Tape Compound 2229

3M Scotch-Seal Mastic Tape Compound 2229 is designed for quick and easy insulating, padding and sealing of electrical connections. It is a conformable, durable, tacky mastic with an easy release liner for easy applications over irregular surfaces and provides excellent moisture resistance. It features superior self-healing characteristics after being punctured or cut.



## 3M™ Scotchfil™ Electrical Insulation Putty

Use as a build-up compound on highly irregular surfaces such as fittings and valves, providing a smooth, waterproof taping surface. Scotchfil Putty is soft and pliable—simply press putty into place on irregular surfaces, mold with finger pressure and overtape using standard methods.



## Scotch® Cable Jacket Repair Tape 2234

Scotch Cable Jacket Repair Tape 2234 has a tough abrasion-resistant backing for jacket repair on industrial cables, such as flexible portable power cables, draglines, diesel locomotive cable, welding and shipboard cables. Due to abrasive dragging and reeling of these flexible cables, the original jacketing gets damaged often and needs to be repaired. Scotch Cable Jacket Repair Tape 2234 is flexible and the self-healing property of the mastic keeps out moisture.



## SCOTCH® CABLE JACKET REPAIR TAPE 2234

FEATURES	ADVANTAGES	BENEFITS
Flexible, Hypalon backing	Oil resistance, abrasion, easy jacket repair	Makes job easier, no rigid areas on the reel
Self-fusing mastic	Fix for flexible cable, excellent moisture seal	Saves money, less moisture-related downtime
Compatible with many cable jackets	One solution for many cables	Saves time







## PRODUCT REFERRAL GENERATOR

- Insulating
- Cold Shrink ..... pg. 384
  - Heat Shrink ..... pg. 384

## Cable Compatibility

Cable Type	Insulation	Jacket
DLO	EPR	CSPE
MC	XPE	PVC
MV	EPR	CSPE/CPE/PVC
PLTC	XPE/PVC	CSPE/PVC
RHH, RHW	CSPE/EPR	EPR/PVC
RW, RWU	XPE	XPE/PVC
SE, THHN, THWN	PVC	PVC
SO, SOW	EPR	CPE
TC	XLP/EPR/PVC	CSPE/PVC/CPE/Neopr.
Welding Cable	EPR	EPDM/EPR
XHHW	XPE	XPE/PVC

## Specifications for Sealing and Insulating Mastic Tapes

Product Name	Product Description	Tape Thickness	U.V. Resistance	Temp. Rating	Typical Applications
 Scotch® Vinyl Mastic 2200 and 2210	Excellent moisture sealant; tough vinyl backing; electrical insulating.	2200 - 125 mil 2210 - 90 mil	Excellent	176°F (80°C)	Insulate moisture-seal and pad connections up to 600V.
 Scotch® Moisture Sealant 06147 and 06149	Excellent moisture sealant; tough vinyl backing; electrical insulating.	6147 - 45 mil 6149 - 45 mil	Excellent	176°F (80°C)	Insulate moisture-seal and pad connections up to 600V.
 Scotch® Rubber Mastic Tape 2228	Self-fusing rubber based compound bonded to a moisture sealing mastic; all weather.	65 mil	No*	194°F (90°C) emergency overload of 266°F (130°C)	Insulate, pad and seal bus bar and splice connections.
 3M® Scotch-Seal Mastic Tape Compound 2229	Conformable and durable mastic. Excellent moisture and environmental seal.	125 mil	No*	176°F (80°C)	Sealing high voltage cables and accessories.
 3M® Scotchfil™ Black, Electrical Insulation Putty	Self-fusing, insulating putty in tape form.	125 mil	N/A	176°F (80°C)	Smooths irregularities on fittings and valves.
 Scotch® Cable Jacket Repair Tape 2234	Tough, black, self-healing, abrasion-resistant backing for jacket repair on industrial cables.	60 mil	No*	194° (90°C) Maximum	Abrasion and moisture resistant, flexible and quick on-site cable repairs.

\* For best UV protection, overwrap with Scotch® Super 33+™.

## Ordering Information for Sealing and Insulating Mastic Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Vinyl Mastic 2200 and 2210</b>				
2200	11008	3-1/4" x 4-1/2" pads (83 mm x 114 mm)	10/box	50 pads
2200	21296	6-1/2" x 4-1/2" pads (165 mm x 114 mm)	10/box	50 pads
2210	11222	4" x 10' roll (102 mm x 3,05 m)	1/box	10
<b>Scotch® Electrical Moisture Sealant 06147 and 06149</b>				
06147	06147	2-1/2" x 10' (63 mm x 3,05 m)	1/roll	10 rolls
06149	06149	2-1/2" x 2-1/2" (63 mm x 63 mm)	25 pads/box	10
<b>Scotch® Rubber Mastic Tape 2228</b>				
2228	50727	1" x 10' (25 mm x 3,05 m)	N/A	12 rolls
2228	43478	2" x 3' (51 mm x 0,9 m)	N/A	48 rolls
2228	09656	2" x 10' (51 mm x 3,05 m)	N/A	10 rolls
<b>3M® Scotch-Seal Mastic Tape Compound 2229</b>				
2229	49702	3-3/4" x 10' (102 mm x 3,05 m)	N/A	8 each
2229	50335	1" x 10' (25 mm x 3,05 m)	N/A	12 each
2229-P	41303	2-1/2" x 3-3/4" pads (63,5 mm x 95,25 mm)	10/box, 40/cs.	40 pads
2229-P	50336	3-3/4" x 3-3/4" pads (95,25 mm x 95,25 mm)	10/box, 40/cs.	40 pads
2229-P	50337	3-3/4" x 6-1/2" pads (95,25 mm x 165,1 mm)	N/A	40 pads
<b>Scotch® Mastic Strip 2230</b>				
2230	41813	5/8" x 6" (15,86 mm x 152,4 mm)	N/A	40 each
<b>3M Scotchfil Electrical Insulation Putty</b>				
2230	41750	1-1/2" x 60" (38 mm x 1,53 m)	4/ctn	12 rolls
<b>Scotch® Cable Jacket Repair Tape 2234</b>				
2234	57493*	2" x 6' (50,8 mm x 1,82 m)	10 rolls/box	10 rolls

\* UPC prefix 051128-

# Corrosion Protection Tapes

## 3M™ Scotchrap™ All-Weather Corrosion Protection Tapes 50 and 51

3M Scotchrap Corrosion Protection Tapes 50 (10 mils) and 51 (20 mils) are tough, polyvinyl chloride (PVC) tapes with high-tack adhesives that resist corrosion of metal piping systems above and below ground. Both tapes apply over a wide temperature range and are resistant to impact, abrasion and punctures. Coat the pipe or other metal surfaces with Scotchrap Pipe Primer before wrapping with Scotchrap 50 or 51.



3M™ Scotchrap™ All-Weather Corrosion Protection Tape 51 and 3M™ Scotchrap Pipe Primer

## 3M™ Scotchrap™ Pipe Primer

A quick-drying, non-sag rubber base primer that permeates metal surface pits and irregularities, preparing the surface for tape application. Compatible with the special adhesive on Scotchrap Tapes, it enhances adhesion. To be used with Scotchrap All-Weather Corrosion Protection Tapes 50 and 51.

### SCOTCHRAP ALL-WEATHER CORROSION PROTECTION TAPE 50

FEATURES	ADVANTAGES	BENEFITS
10 mils, PVC backing	Flexible	Easy to use, which saves time
Excellent moisture and abrasive resistance	Resists pipe corrosion	Cuts down on replacement costs
High quality adhesive	Excellent quick stick	Easy to use

### SCOTCHRAP ALL-WEATHER CORROSION PROTECTION TAPE 51





FEATURES	ADVANTAGES	BENEFITS
20 mils, PVC backing	Superior mechanical strength and abrasion resistance	Provides confidence about the job and freedom from worry

NOTE: Scotchrap Pipe Primer should be used with all corrosion protection tapes.

### PRODUCT REFERRAL GENERATOR

Insulating	
– Tape .....	pg. 14
Padding .....	pg. 14
Sealing and Repair .....	pg. 383

## Specifications for Corrosion Protection Tapes

Product Name	Product Description	Tape Thickness	U.V. Resistance	Temp. Rating	Typical Applications
 3M™ Scotchrap™ Corrosion Protection 50 and 51	All-weather performance and corrosion resistance. Resistant to impact and abrasions.	50 - 10 mil 51 - 20 mil	Excellent Excellent	176°F (80°C)	Corrosion protection on pipes, conduits and fittings, etc.
 3M™ Scotchrap™ Pipe Primer	Quick-dry, non-sag rubber base primer that prepares metal surfaces for tape application.	N/A	N/A	176°F (80°C)	For use with Scotchrap tapes 50 and 51 and Temflex™ Tape 1100.
 3M™ Temflex™ Tape 1100	General purpose corrosion resistant tape. Good abrasion resistance.	10 mil	Yes	176°F (80°C)	Corrosion protection on conduits, fittings and joints, etc.
 3M™ Temflex™ Tape 1200	General purpose corrosion resistant tape. Good abrasion resistance.	20 mil	Yes	176°F (80°C)	Corrosion protection on conduits, fittings and joints, etc.

## Ordering Information for Corrosion Protection Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>3M Scotchrap All-Weather Corrosion Protection Tapes 50 and 51, black</b>				
50	11149	1" x 100' (25 mm x 30,5 m)	1/box	10 rolls
50	00014	1" x 100' (25 mm x 30,5 m)	N/A	48 rolls
50	11156	2" x 100' (51 mm x 30,5 m)	1/box	10 rolls
50	10638	2" x 100' (51 mm x 30,5 m)	N/A	24 rolls
50	09468	3" x 100' (76 mm x 30,5 m)	N/A	16 rolls
50	10646	4" x 100' (102 mm x 30,5 m)	N/A	12 rolls
50	15785	6" x 100' (152 mm x 30,5 m)	N/A	8 rolls
50 Printed*	00012	1" x 100' (25 mm x 30,5 m)	N/A	48 rolls
50 Printed	00013	2" x 100' (51 mm x 30,5 m)	N/A	24 rolls
50 Printed	00018	4" x 100' (102 mm x 30,5 m)	N/A	12 rolls
51	42806	1" x 100' (25 mm x 30,5 m)	N/A	24 rolls
51	42807	2" x 100' (51 mm x 30,5 m)	N/A	12 rolls
51	42808	4" x 100' (102 mm x 30,5 m)	N/A	4 rolls
51	42809	6" x 100' (152 mm x 30,5 m)	N/A	4 rolls
51 Printed**	42802	1" x 100' (25 mm x 30,5 m)	N/A	24 rolls
51 Printed	42803	2" x 100' (51 mm x 30,5 m)	N/A	12 rolls
51 Printed	42804	4" x 100' (102 mm x 30,5 m)	N/A	4 rolls
51 Printed	42805	6" x 100' (152 mm x 30,5 m)	N/A	4 rolls
Note: 100 sq. ft. (9,3 m <sup>2</sup> ) of tape equals a square. Example: 2 rolls of 6 in. x 100 ft. (152 mm x 30,5 m), 3 rolls of 4 in. x 100 ft. (101 mm x 30,5 m), 6 rolls of 2 in. x 100 ft. (51 mm x 30,5 m), 12 rolls of 1 in. x 100 ft. (25 mm x 30,5 m)				
<b>3M Scotchrap Pipe Primer</b>	42768	1 gallon can (3,79 liters)	N/A	4 gallons
<b>3M Temflex Corrosion Protection Tape 1100</b>				
1100 Printed	09065	2" x 100' (51 mm x 30,5 m)	N/A	24 rolls
1100	09061	2" x 100' (51 mm x 30,5 m)	N/A	24 rolls
<b>3M Temflex Corrosion Protection Tape 1200</b>				
1200 Printed	51128-56330	2" x 100' (51 mm x 30,5 m)	N/A	12 rolls

Note: 3M Scotchfil™ Putty must be overwrapped with Scotchrap or Temflex. Note: Printed tapes are printed with product name and thickness.

\*Printed version of 50 Tape is Scotchrap Tape 10 mil

\*\*Printed version of 51 Tape is Scotchrap Tape 20 mil

# Mining Tapes and Kits


## Scotch® Heavy Duty Mining Tape 31

Scotch Heavy Duty Mining Tape 31 has a tough, abrasion-resistant backing for jacket repair on mining cables. Due to the extreme mining environment, the original jacket on mining cable gets damaged and needs repair. MSHA-approved Scotch Heavy Duty Mining Tape 31 offers an innovative solution for cable repair. With its Hypalon® backing, abrasion-resistant properties and flame retardant mastic, the tape applies easily and remains flexible while maintaining a strong moisture seal.



Scotch® Heavy Duty Mining Tape 31

## Specifications for Mining Tapes and Kits

Product Name	Product Description	Tape Thickness	U.V. Resistance	Temp. Rating	Typical Applications
 Scotch® Heavy Duty Mining Tape 31	Tough, black, self-healing, abrasion-resistant backing for jacket repair on mining cables. P-07-KA080005-MSHA	60 mil	No	194°F (90°C) Maximum	Abrasion and moisture resistant, flexible and quick on-site cable repairs.

## Ordering Information for Mining Tapes and Kits

Product Number	UPC (051128-)	Size	Inner Unit Pack	Case Qty.
Scotch® Heavy Duty Mining Tape 31	57149	2" x 6' (51 mm x 1,82 m)	10 rolls/box	10 rolls
Scotch® Heavy Duty Mining Tape 31	56812	2" x 8.5' (51 mm x 2,4 m)	10 rolls/box	10 rolls
Scotch® Heavy Duty Mining Tape 31	57150	2" x 10' (51 mm x 3,05 m)	10 rolls/box	10 rolls

## 3M™ Splice Kit Contents

Kit Contents	Size	Voltage	Cable Range
<b>MINING CABLE SPLICE KIT 3100</b>			
1 Scotch® Heavy Duty Mining Tape 31	2" x 8.5'	600V - 2kV	#6-500 kcmil
1 Scotch® Linerless Rubber Splicing Tape 130C	1-1/2" x 30'	600V - 2kV	#6-500 kcmil
1 3M™ Temflex™ Vinyl Electrical Tape 1700P	1-1/2" x 44'	600V - 2kV	#6-500 kcmil
1 3M™ Cable Cleaning Preparation Kit CC-2-Dry		600V - 2kV	#6-500 kcmil
<b>MINING CABLE SPLICE KIT 3103</b>			
2 Scotch® Heavy Duty Mining Tape 31	2" x 8.5'	5 - 15kV	#6-500 kcmil
1 3M™ Temflex™ Vinyl Electrical Tape 1700P	1-1/2" x 44'	5 - 15kV	#6-500 kcmil
3 Scotch® Electrical Shielding Tape 24	2" x 10'	5 - 15kV	#6-500 kcmil
2 Scotch® Rubber Mastic Tape 2228	1" x 10'	5 - 15kV	#6-500 kcmil
2 3M™ Cable Cleaning Preparation Kit CC-2-Dry		5 - 15kV	#6-500 kcmil
3 Scotch® Electrical Semi-Conductive Tape 13	3/4" x 15'	5 - 15kV	#6-500 kcmil
3 Scotch® Linerless Rubber Splicing Tape 130C	1-1/2" x 30'	5 - 15kV	#6-500 kcmil
3 Scotch® Linerless Rubber Splicing Tape 130C	3/4" x 30'	5 - 15kV	#6-500 kcmil

## 3M™ Splice Kit Contents

Kit Contents	Size	Voltage	Cable Range
<b>MINING CABLE SPLICE KIT 3104</b>			
1 Scotch® Heavy Duty Mining Tape 31	2" x 8.5'	2kV	#6-500 kcmil
1 3M™ Temflex™ Vinyl Electrical Tape 1700P	1-1/2" x 44'	2kV	#6-500 kcmil
2 Scotch® Electrical Shielding Tape 24	2" x 10'	2kV	#6-500 kcmil
1 3M™ Cable Cleaning Preparation Kit CC-2-Dry		2kV	#6-500 kcmil
2 Scotch® Linerless Rubber Splicing Tape 130C	1-1/2" x 30'	2kV	#6-500 kcmil

## Kit Replacement Products

Product Name	Stock Number	UPC (054007-)	Size	Packaging	Minimum Order Qty.
Scotch® Heavy Duty Mining Tape	3180-6114-3749-4	051128-57149	2" x 6' (51 mm x 1,8 m)	10 rolls/box	10 rolls
Scotch® Heavy Duty Mining Tape	3180-6114-3400-4	051128-56812	2" x 8.5' (51 mm x 2,6 m)	10 rolls/box	10 rolls
Scotch® Heavy Duty Mining Tape	3180-6114-3750-2	051128-57150	2" x 10' (51 mm x 3,05 m)	10 rolls/box	10 rolls
Scotch® Linerless Rubber Splicing Tape	130C80-6108-3340-4	41717	3/4" x 30' (19 mm x 9,1 m)	24 rolls/box	24 rolls
Scotch® Linerless Rubber Splicing Tape	130C80-6108-3341-2	41718	1-1/2" x 30' (38 mm x 9,1 m)	12 rolls/box	12 rolls
3M™ Temflex™ Vinyl Electrical Tape	1700P80-6101-5439-7	08408	1-1/2" x 44' (38 mm x 13,4 m) bulk	N/A	100 rolls
Scotch® Electrical Shielding Tape	2480-6114-3889-8	051128-57289	2" x 10' (51 mm x 3,05 m)	20 rolls/box	20 rolls
Scotch® Electrical Semi-Conducting Tape	13HT-0020-0121-8	15017	3/4" x 15' (19 mm x 4,57 m)	1/box, 10/ctn.	10 rolls
Scotch® Rubber Mastic Tape 2228	80-6107-3766-2	50727	1" x 10' (25 mm x 3,05 m)	12 rolls/box	12 rolls
Scotch® Rubber Mastic Tape 2228	80-6103-2294-5	09656	2" x 10' (51 mm x 3,05 m)	12 rolls/box	10 rolls
3M™ Cable Cleaning Preparation Kit CC-2-Dry	80-6112-0013-2	43414		10/each	10 kits
3M™ Cable Cleaning Preparation Kit CC-2	80-6105-9299-2	49563		10/each	10 kits
Scotch® Glass Cloth Tape 27	80-0120-2036-0	15074	3/4" x 66'	50 rolls/box	10 rolls
Scotch® Glass Cloth Tape 69	80-0180-0360-0	09910	3/4" x 66'	50 rolls/box	10 rolls



3M™ Mining Cable Splice Kit 3100



3M™ Mining Cable Splice Kit 3103



3M™ Mining Cable Splice Kit 3104

## Special Use Tapes

3M provides a wide range of tapes for special applications, from electrically insulating glass cloth tapes, to gaffers tape, and even duct tape.

### Scotch® Glass Cloth Electrical Tapes 27 and 69

Scotch Glass Cloth Electrical Tapes 27 and 69 are woven glass cloth tapes with thermosetting, pressure-sensitive adhesives, which electrically insulate and provide mechanical protection at high temperatures. Scotch Electrical Tapes 27 Class B—266°F (130°C) and 69 Class H—356°F (180°C) deliver high-temperature performance.

### Scotch® Thread Sealant and Lubricant 48

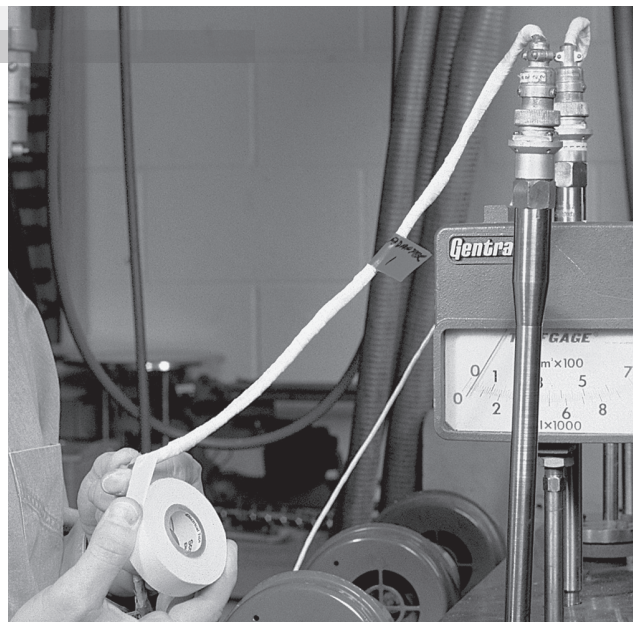
Scotch Thread Sealant Tape 48 is a high temperature stable (PTFE) pipe thread sealant that provides a leakproof seal.

### Scotch® Performance Masking Tape 232

Scotch Performance Masking Tape 232 is a tough and extremely smooth, natural-colored, 6.3 mil (0,14 mm) thick, high performance, crepe paper tape. It is excellent for paint masking as well as many industrial applications. Scotch Masking Tape 232 will generally function during bake cycles of up to 250°F (121°C) for periods up to one hour. It should not be exposed to outdoor elements. It can be qualified to meet Fed. Spec. PPP-T-42C Type I and CID A-A-883B.

### Scotch® General Purpose Masking Tape 234

Scotch General Purpose Masking Tape 234 is a natural-colored, 6.0 mil (0,14 mm) thick, paper tape. It is excellent for general industrial applications. It will generally function during bake cycles of up to 250°F (121°C) for periods up to one hour. It should not be exposed to outdoor elements. It can be qualified to meet Fed. Spec. PPP-T-42C Type I and CID A-A-883B.



Scotch® Glass Cloth Electrical Tape 27

### Scotch® Transparent Duct Tape 2120-A

Scotch Transparent Duct Tape 2120-A offers clear advantages to ordinary duct tape. It is transparent when applied to make repairs less obvious, lasts six times longer than heavy duty duct tapes, tears easily by hand, and is resistant to water and UV rays. Scotch Transparent Duct Tape is extremely versatile and can be used on plastic, wood, glass, metal, vinyl and rubber.

### 3M™ Performance Plus Duct Tapes 8979/8979N

Offers six months of clean removal from most opaque surfaces; there is no sticky or dried-on adhesive residue to clean. Sunlight/UV and water resistant. It even stays on indoors and outdoors for up to one year without deterioration even in sunlight.














## PRODUCT REFERRAL GENERATOR

Hi Temp Insulating – 70 Tape .....	pg. 9
Terminating .....	pg. 261
Connecting .....	pg. 147







## SCOTCH TAPE 27 AND 69

FEATURES	ADVANTAGES	BENEFITS
High temperature thermosetting adhesive	Excellent solvent resistance	Improves safety
Class B rating to Class H	High temperature resistance	Provides freedom from worry
Glass cloth backing	Mechanical protection	Lasts longer and improves safety

## Specifications for Special Use Tapes

Product Name	Product Description	Tape Thickness	Temp. Rating	Typical Applications	Specs./ Certifications and Listings
 Scotch® Glass Cloth Tape 27 and 69	Woven insulating glass cloth; high temperature resistance; high mechanical strength.	27-7 mil 69-7 mil	27 is Class B temp 266°F (130°C) 69 is class H temp 356°F (180°C)	Heat-stable insulation for furnace and oven controls, motor leads, and switches.	Meets:  File E LR93411 17385
 Scotch® Thread Sealant and Lubricant Tape 48	Pipe thread sealant that provides a leakproof seal.	3 mil	500°F (260°C)	Leakproof seal helps prevent cross threading on pipe threads.	N/A
 Scotch® Performance Masking Tape 232	Premium grade masking tape.	6.3 mil	Up to 250°F (121°C)	Paint masking tape, bundling and protecting.	N/A
 Scotch® General Purpose Masking Tape 234	General purpose masking tape.	6.0 mil	Up to 250°F (121°C)	Holding, sealing, non-critical masking.	N/A
 3M™ Paper Tape 200	Utility purpose paper tape.	4.5 mil	200°F (93°C)	Non-critical masking and holding.	N/A
 3M™ Temflex™ Cotton Friction Tape 1755	High grade friction tape. Good abrasion resistance.	15 mil	176°F (80°C)	Abrasion protection for splices and connections.	N/A
 3M™ Duct Tape 6969	Extra heavy duty duct tape; excellent adhesion, tears easily. Silver.	10.7 mil	200°F (93°C)	Moisture proofing, plumbing, duct sealing, and protecting.	Meets:  HUD and BOCA
 3M™ Duct Tape 3939	Heavy duty duct tape; good adhesion, strong backing. Silver.	9 mil	150°F (65°C)	Sealing heating ventilation and air conditioning ducts.	Meets:  HUD and BOCA
 Scotch® Heavy Duty All-Weather Duct Tape 2245	Resists harsh outdoor conditions and stays pliable.	9.5 mil	Up to 150°F (66°C)	Outdoor projects.	Meets:  HUD and BOCA

## Specifications for Special Use Tapes

Product Name	Product Description	Tape Thickness	Temp. Rating	Typical Applications	Specs./ Certifications and Listings
 Scotch® Professional HVAC Duct Tape 133DC	Aggressive adhesive for air and moisture, light industrial, and HVAC applications.	10 mil	200°F (93°C)	Wrapping pipes, sealing ducts, general repairs.	 Meets: HUD and BOCA
 3M™ Utility Duct Tape 2929	General use, quick easy tear.	6.0 mil	200°F (93°C)	Temporary repairs, light duty applications.	N/A
 3M™ Performance Plus Duct Tape 8979	6 month clean removal duct tape. Sunlight resistant, leaves behind no sticky residue.	12.6 mil	200°F (93°C)	Cap pipe ends and conduit stored outdoors. Hanging, sealing poly drapes.	 Meets: HUD and BOCA
 3M™ Performance Plus Duct Tape 8979N-Nuclear	6 month clean removal duct tape. Sunlight resistant, leaves behind no sticky residue.	12.6 mil	200°F (93°C)	Critical containment for utilities and nuclear power plants. Outdoor use, without deterioration up to 1 year.	Certified to meet low halogens and sulfur levels. ASME NQA-1, MIL-STD-2041D
 Scotch® Transparent Duct Tape 2120-A	Transparent, resistant to water and UV rays.	9 mil	173°F	Bundling, patching, sealing, general repairs.	N/A
 Scotch® Electricians Bundling Tape 2000	General purpose easy tear vinyl duct tape.	6 mil	N/A	General holding and bundling.	N/A
 3M™ Duct Tape 3900	Multipurpose duct tape. Available in seven colors for color-coding jobs.	7.7 mil	200°F (93°C)	Maintenance and repair, pulling wires through conduit.	 Meets: HUD and BOCA
 3M™ Cloth Gaffers Tape 6910	High tack, easy tear coated cloth tape.	12 mil	Up to 200°F (93°C)	Sealing and holding where minimum light reflection and glare are required.	N/A
 3M™ Outdoor Masking and Stucco Tape 5959	90-day clean removal. Indoor/Outdoor duct tape. Sunlight resistant, leaves behind no residue.	13 mil	Up to 200°F (93°C)	For masking stucco, eifs tile, brick, concrete, stonework and composites.	 Meets: HUD and BOCA
 3M™ Value Duct Tape 1900	Economical choice, quick easy tear.	6 mil	Up to 150°F (65°C)	For cost effective applications.	N/A
 3M™ Vinyl Duct Tape 3903	Low-medium adhesion for all-around jobs. Available in seven colors for color coding.	6.2 mil	Up to 250°F (121°C)	For all-around jobs.	N/A

## Ordering Information for Special Use Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
<b>Scotch® Glass Cloth Electrical Tape 27 and 69</b>				
27	15066	1/2" x 66' (13 mm x 20 m)	1/box, 10/ctn	50 rolls
27	15074	3/4" x 66' (19 mm x 20 m)	1/box, 10/ctn	50 rolls
27	27477	3/4" x 60 yd. (19 mm x 54.8 m)	N/A	12 rolls
27	10570	1" x 60 yd. (25 mm x 54.8 m)	N/A	9 rolls
27	27478	1-1/2" x 60 yd. (38 mm x 54.8 m)	N/A	24 rolls
69	10083	1/2" x 66' (13 mm x 20 m)	1/box, 10/ctn	50 rolls
69	27548	1/2" x 36 yd. (13 mm x 33 m)	N/A	18 rolls
69	09910	3/4" x 66' (19 mm x 20 m)	1/box, 10/ctn	50 rolls
69	27493	3/4" x 36 yd. (19 mm x 33 m)	N/A	12 rolls
69	27494	1" x 36 yd. (25 mm x 33 m)	N/A	9 rolls
Note: Only available sizes.				
<b>Scotch® Thread Sealant and Lubricant Tape 48</b>				
48	06192	1/4" x 260" (6,3 mm x 7 m)	N/A	12 rolls
48	06195	1/2" x 260" (13 mm x 7 m)	N/A	12 rolls
48	06196	1/2" x 520" (13 mm x 13 m)	N/A	12 rolls
48	27571	1/2" x 1296" (13 mm x 33 m)	N/A	12 rolls
Note: Other widths and lengths are available.				
<b>Scotch® Performance Masking Tape 232</b>				
232	02853*	3/4" x 60 yd. (18 mm x 54.8 m)	N/A	48 rolls
232	02854*	1" x 60 yd. (24 mm x 54.8 m)	N/A	36 rolls
232	04240*	2" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
<b>Scotch® General Purpose Masking Tape 234</b>				
234	02981*	3/4" x 60 yd. (18 mm x 54.8 m)	N/A	48 rolls
234	02982*	1" x 60 yd. (24 mm x 54.8 m)	N/A	36 rolls
234	04244*	2" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
<b>3M™ Paper Tape 200†</b>				
200	53469††	1/2" x 60 yd. (12 mm x 54.8 m)	N/A	72 rolls
200	53464††	3/4" x 60 yd. (18 mm x 54.8 m)	N/A	48 rolls
200	53465††	1" x 60 yd. (24 mm x 54.8 m)	N/A	36 rolls
200	53470††	1-1/2" x 60 yd. (36 mm x 54.8 m)	N/A	24 rolls
200	53466††	2" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
200	53467††	3" x 60 yd. (72 mm x 54.8 m)	N/A	12 rolls
200	53468††	4" x 60 yd. (96 mm x 54.8 m)	N/A	8 rolls
<b>3M™ Temflex™ Cotton Friction Tape 1755</b>				
1755	50218	3/4" x 60' (19 mm x 18 m)	N/A	60 rolls

\*UPC prefix 021200-

\*\*UPC prefix 051131-

\*\*\*UPC prefix 051115-

†Order product in metric units.

††UPC prefix 048011-

## Ordering Information for Special Use Tapes

Product Number	UPC (054007-)	Size	Inner Unit Pack	Case Qty.
1755	50216	3/4" x 82-1/2' (19 mm x 25 m)	N/A	60 rolls
1755	50217	1-1/2" x 82-1/2' (38 mm x 25 m)	N/A	30 rolls
<b>3M™ Duct Tape 6969</b>				
6969 Silver	06969**	1.88" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
6969 Silver	85635*	2.83" x 60 yd. (72 mm x 54.8 m)	N/A	12 rolls
<b>3M™ Duct Tape 3939</b>				
3939 Silver	85561*	.94" x 60 yd. (24 mm x 54.8 m)	N/A	36 rolls
3939 Silver	06975**	1.88" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
3939 Silver	85562*	2.83" x 60 yd. (72 mm x 54.8 m)	N/A	12 rolls
3939 Silver	85563*	3.77" x 60 yd. (96 mm x 54.8 m)	N/A	12 rolls
Note: 3M Tartan Tape 3939 replaces 3M Temflex Tape 3930.				
<b>Scotch® Heavy Duty All-Weather Duct Tape 2245</b>				
	92040**	1.88" x 45 yd. (48 mm x 40 m)	N/A	12 rolls
<b>Scotch® Professional HVAC Duct Tape 133DC†</b>				
	50254**	1.88" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
<b>3M™ Outdoor Masking and Stucco Tape 5959</b>				
	25491***	1.88" x 45 yd. (48 mm x 40 m)	N/A	12 rolls
<b>3M™ Value Duct Tape 1900</b>				
1900	23421***	1.88" x 50 yd. (48 mm x 45.7 m)	N/A	24 rolls
1900	23422***	2.83" x 50 yd. (72 mm x 45.7 m)	N/A	12 rolls
<b>3M™ Vinyl Duct Tape 3903</b>				
3903 Gray	06984**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 Blue	06978**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 Green	06986**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 Yellow	06982**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 White	06981**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 Red	06992**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
3903 Black	06995**	1.97" x 50 yd. (50 mm x 45.7 m)	N/A	24 rolls
<b>3M™ Utility Duct Tape 2929</b>				
2929 Silver	24883***	1.88" x 50 yd. (48 mm x 45.7 m)	N/A	24 rolls
2929 Silver	24885***	2.83" x 50 yd. (72 mm x 45.7 m)	N/A	12 rolls
<b>3M™ Performance Plus Duct Tape 8979</b>				
8979 Slate Blue	53922††	.94" x 60 yd. (24 mm x 54.8 m)	N/A	48 rolls
8979 Slate Blue	56468*	1.88" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls
8979 Slate Blue	53851††	1.88" x 25 yd. (48 mm x 22.8 m)	N/A	12 rolls
8979 Slate Blue	56469*	2.83" x 60 yd. (72 mm x 54.8 m)	N/A	12 rolls
8979 Slate Blue	56470*	3.77" x 60 yd (96 mm x 54.8 m)	N/A	12 rolls
8979 Black	53918††	12" x 60 yd. (48 mm x 54.8 m)	N/A	24 rolls

\*UPC prefix 021200-

\*\*UPC prefix 051131-

\*\*\*UPC prefix 051115-

†Order product in metric units.

††UPC prefix 048011-