



Associated Gaskets



Electrical Tapes



About AG

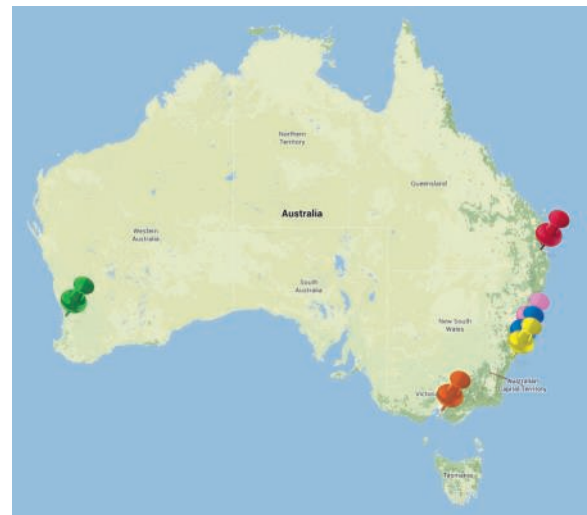
Associated Gaskets is a 100% Australian owned company dedicated to providing high quality solutions and exemplary service to Australian industry. Founded in 1965, we continue to expand the range of products and services we offer to help our customers meet ever growing needs for safety, efficiency and performance.

This brochure is designed to provide a little more information on our range of 3M Electrical Tapes. In addition to this selection of high quality insulation tapes, AG is also pleased to offer a full range of gaskets, seals, thermal and electrical insulation, adhesives and sealants, technical sprays, technical liquids, safety products and industrial tapes. These are held in large stock quantities across our network of branches and are coupled with extensive fabrication facilities so that we can provide the exact component you require.

If you would like more information on any 3M Tape listed in this guide, or assistance with any other product in our diverse range, please contact your local AG branch.

Industries Served

- Agricultural
- Automotive
- Chemical & Petro-Chemical
- Construction
- Defence & Aerospace
- Electric Motor Rewinders & OEMs
- Electronics
- Engineering
- Food & Beverage
- Manufacturing
- Marine & Shipbuilding
- Metallurgical
- Mining
- Oil & Gas
- Paper, Pulp & Board
- Pharmaceutical
- Power Generation & Transmission
- Renewable Energy
- Switchboard Manufacture & Repair
- Tradespeople
- Transformer Manufacture & Repair
- Transport
- Water & Waste
- & Many, Many More...



Services Offered

- 3D Modelling & Drawing
- Die Cutting
- Extrusions
- Individualised Documentation
- Inventory Management
- Kiss Cutting
- Kits & Custom Packaging
- Laser Cutting
- Machining
- Moulding
- Product Coding & Traceability
- Rapid-Prototyping
- Sample Reproduction
- Sewing
- Shut Down Services
- Slitting
- Thicknessing
- Water Cutting
- & Many More...

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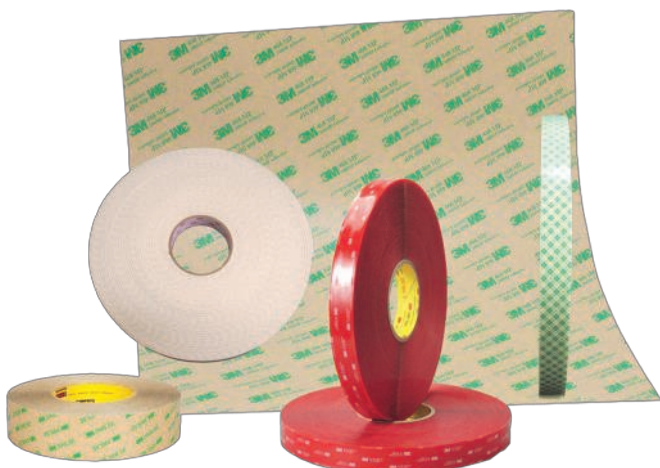
AG's 3M Tapes

Known for their quality, performance and reliability 3M's tapes are used in a variety of applications and industries around the world. Associated Gaskets is proud to offer a comprehensive selection of tapes from this world-leading manufacturer coupled with large stock holdings and extensive customisation options so that you can select the very best tape for your application.

This brochure includes information on some of the most commonly used grade of 3M Electrical Tapes offered by AG, but this list is by no means exhaustive. We offer many, many more grades for all kinds of insulation, sealing, and bonding applications and can also arrange for specialised lengths and sizes to be supplied for critical applications.

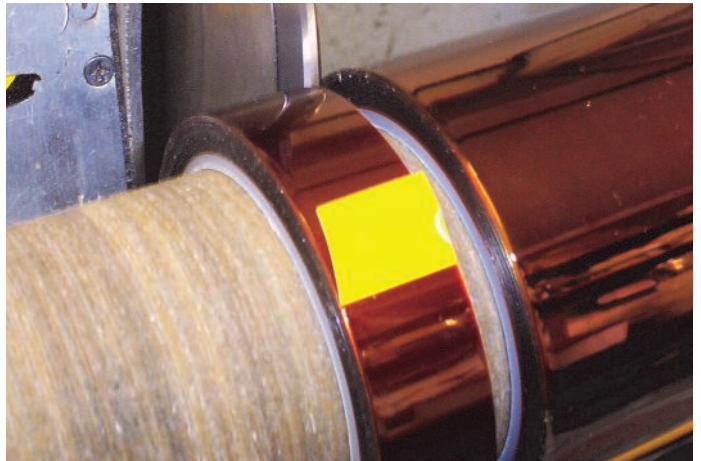


The following pages contain more information on just some of the customisation options and 3M Electrical Tapes available from AG. If you would like more information on a particular grade, confirmation that a particular size can be produced, or assistance in determining the best tape for your application; please don't hesitate to contact your local Associated Gaskets branch.



Slitting & Re-Rolling

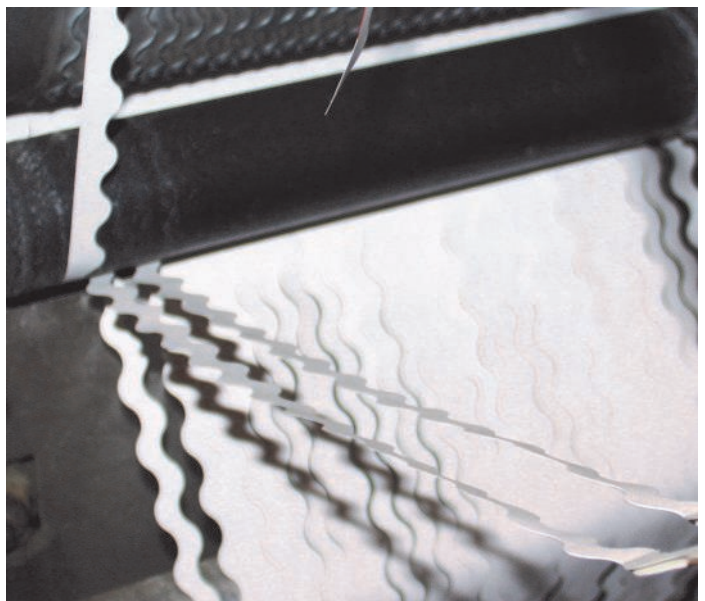
AG is pleased to offer a comprehensive slitting service that can produce the exact tape you require. Wherever possible we hold log roll stock of our extensive range of tapes so that we can convert them into the exact width you need.



The vast majority of the tapes listed in this brochure are slit in-house by AG. As you browse through this brochure you'll notice that we list standard widths for all and, whenever log roll stock is available, we also note that that particular grade is available in custom slit rolls.

Depending on the tape, our slitting facilities can produce rolls measuring anywhere from 2mm to over 1000mm wide and can cut to tight tolerances.

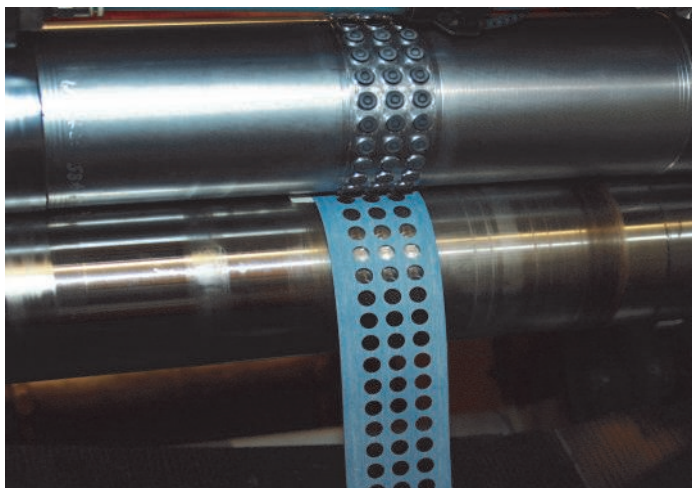
By combining our slitting facilities with our large quantities of stock and commitment to service we can deliver custom slit rolls on tight lead times. Since all this work is done in-house at AG, we can also provide slit rolls in custom packaging or deliver direct to site whenever this is required.



Die Cutting

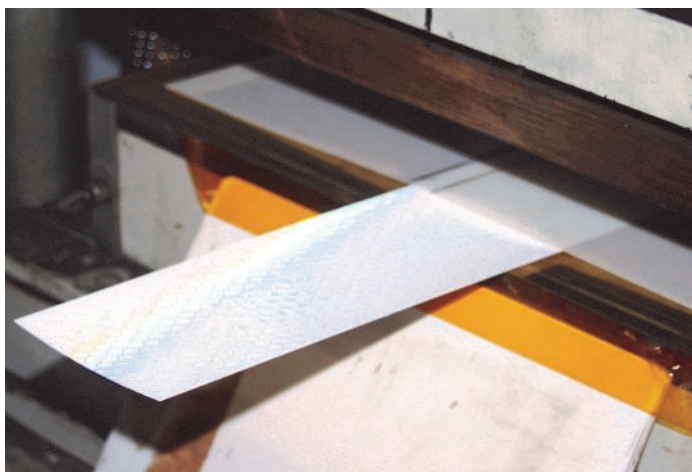
AG's die cutting facilities allow us to offer precision cut components that are extremely economical. With almost 50 years experience in die cutting various forms of electrical insulation materials, AG has the range of dies and experience needed to produce accurate components used in a variety of electronic applications.

By combining these facilities with our enormous range of electrical insulation materials and tapes, we can offer you the exact material and size you require without the need for any compromises. Since we stock the materials and have our own fabrication facilities you can also be sure that your components will be supplied to meet the needs of your production or repair schedule.



Of the tapes listed in this brochure, perhaps the most commonly die cut are the range of EMI Shielding Tapes. AG understands the critical nature of these materials and can supply them in specialised packaging and with custom labels to ensure that they are not contaminated in any way.

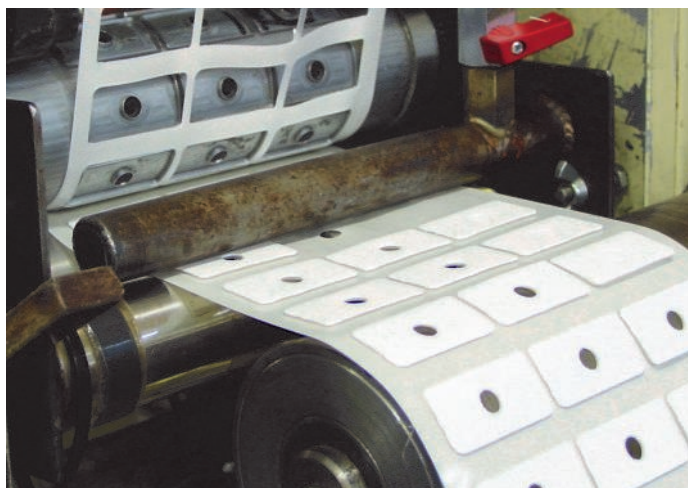
For more information on the complete range of die cutting options available please contact your local AG branch today.



Kiss Cutting

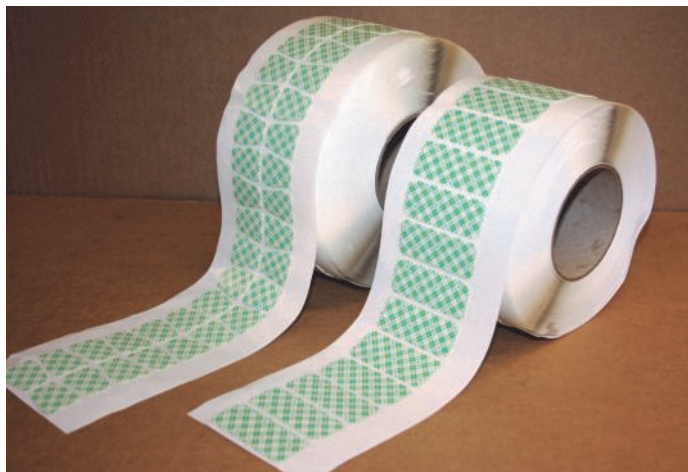
Similar in a sense to die cutting, Kiss Cutting is an incredibly precise technique which results in cut components being perfectly punctured without cutting through the underlying liner. This means that AG's kiss cutting facilities can produce intricate, custom shaped components supplied on their original carrier.

The use of this cutting method for producing custom cut componentry is of particular benefit when the pieces being produced are going to be applied in rapid succession. Since they're supplied on their original backing and in roll form they are easy to remove and apply leading to greater accuracy and labour savings.



Using our in-house equipment, AG supplies kiss cut components from a variety of different tapes and roll products. We have an extensive range of die shapes already available and can tool-up for other designs quickly and with little cost.

For more information on our kiss cutting capabilities, or for help deciding whether this may be a viable method for producing the component you require please don't hesitate to contact your local Associated Gaskets branch.



3M™ Electrical Insulation Tapes

3M Scotch 5 Adhesive Polyester Tape

A high quality electrical insulation tape manufactured from a clear polyester film layer coated with an oil-compatible pressure sensitive adhesive. 3M Scotch 5 Adhesive Polyester Tape offers excellent conformability, good adhesion and carries a UL recognised temperature rating to 130°C.



Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 66Mtrs

Typical Properties

Adhesive	Acrylic
Backing	Polyester Film
Backing Thickness ¹	0.025mm
Total Thickness ¹	0.063mm
Temperature Class	130°C
Breaking Strength ¹	44 N/10mm
Elongation	100%
Adhesion to Steel ¹	3.8 N/10mm
Dielectric Strength ¹	5,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M 56 Polyester Film Tape

Manufactured from a thin (0.025mm) layer of yellow polyester film and a thermosetting rubber adhesive. 3M 56 Tape offers good adhesion, excellent conformability and is very easy to apply to tight turns and bends. This electrical tape is typically used as layer insulation or as a coil cover tape in applications where temperatures will not exceed 130°C.



Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 66Mtrs

Typical Properties

Adhesive	Thermosetting Rubber
Backing	Polyester Film
Backing Thickness ¹	0.025mm
Total Thickness ¹	0.058mm
Temperature Class	130°C
Breaking Strength ¹	44 N/10mm
Elongation	100%
Adhesion to Steel ¹	5.5 N/10mm
Dielectric Strength ¹	5,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M 74 Polyester Film Tape

An incredibly thin grade of adhesive polyester tape. 3M 74 is made using a 0.0127mm thick layer of polyester film coated on one side with a rubber thermosetting adhesive. Apart from the thickness, this tape is other wise quite similar to our 3M 56 Polyester Tape and is also used as layer insulation or as a coil cover tape in applications where temperatures will not exceed 130°C.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 66 Mtrs						

Typical Properties

Adhesive	Thermosetting Rubber
Backing	Polyester Film
Backing Thickness ¹	0.0127mm
Total Thickness ¹	0.02mm
Temperature Class	130°C
Breaking Strength ¹	21 N/10mm
Elongation	100%
Adhesion to Steel ¹	2.2 N/10mm
Dielectric Strength ¹	3,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M 44 Composite Film Tape

A UL recognised tape with outstanding conformability, puncture resistance and electrical properties. 3M 44 Electrical Tape is a low halogen tape manufactured from a combination of polyester film, polyester web film and a rubber thermosetting adhesive. This high strength adhesive tape is used for protecting a variety of electrical components (e.g. motor leads, start wires, terminal strips, end turns) and coil winding applications.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 82.3Mtrs						

Typical Properties

Adhesive	Thermosetting Rubber
Backing Thickness	0.058mm
Total Thickness	0.139mm
Temperature Class	130°C
Elongation	50%
Adhesion to Steel	7.1 N/10mm
Dielectric Breakdown	5,500V
Breaking Strength	70 N/10mm
Insulation Resistance	>1 X 10 ⁶ megohms

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M 27 Adhesive Glass Tape

Manufactured from a woven insulation glass cloth with a pressure-sensitive rubber thermosetting adhesive 3M 27 Adhesive Glass Tape offers good adhesion, dielectric strength and longevity. The glass cloth will not shrink, rot or burn and has a high tensile strength. This high quality insulation tape is UL recognised and used in a variety of electrical insulation applications.



Typical Properties

Adhesive	Thermosetting Rubber
Backing Thickness	0.125mm
Total Thickness	0.177mm
Temperature Class	150°C
Elongation	5%
Adhesion to Steel	3.3 N/10mm
Dielectric Breakdown	3,000V
Breaking Strength	262 N/10mm
Insulation Resistance	4.5 X 10 ⁴ megohms

Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 55Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M 69 Adhesive Glass Tape

A white glass cloth tape with a thermosetting pressure-sensitive silicone adhesive. 69 Glass Tape provide high mechanical strength and resistance to operating temperatures up to 200°C. This electrical insulation tape meets the requirements of a number of international certifications (e.g. MIL-Spec, UL & CSA) and is typically used for coil covering, banding, bundling, splicing and other high temperature electrical applications.



Typical Properties

Adhesive	Silicone Thermosetting
Backing Thickness	0.125mm
Total Thickness	0.177mm
Operating Temperature	200°C
Elongation	5%
Adhesion to Steel	4.4 N/10mm
Dielectric Breakdown	3,000V
Breaking Strength	314 N/10mm
Insulation Resistance	4.8 X 10 ⁴ megohms
UL 510 Flame Retardant	Yes

Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 33Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M 11 Acetate Cloth Tape

An easy to use electrical insulation tape, 3M 11 Acetate Cloth Tape is aesthetically pleasing and offers outstanding conformability for tight coil wrapping and covering applications. This tape also exhibits excellent absorption of resins and varnishes used in insulation processes.



Typical Properties

Adhesive	Thermosetting Rubber
Total Thickness	0.178mm
Temperature Class	105°C
Dielectric Breakdown	2,000V
Insulation Resistance	2 X 10 ⁴ megohms
Breaking Strength ¹	62 N/10mm
Elongation	10%
Adhesion to Steel ¹	4.4 N/10mm

¹ Test Method ASTM D-1000

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 66Mtrs						

Also available in slit rolls cut to whatever custom width you require.

3M 92 Adhesive Polyimide Tape

A high voltage, high temperature electrical insulation tape 3M 92 Tape is manufactured using a 0.025mm layer of polyimide film and a silicone adhesive. This tape is UL recognised for flame retardancy and is used in environments where temperatures reach as high as 180°C. Typical uses include wrapping coils, capacitors, transformers and wire harnesses; it is also used as a wave solder masking tape for printed circuits.



Typical Properties

Adhesive	Silicone Thermosetting
Backing	Polyimide film
Backing Thickness ¹	0.025mm
Total Thickness ¹	0.076mm
Temperature Class	180°C
Breaking Strength ¹	53 N/10mm
Elongation	55%
Adhesion to Steel ¹	2.8 N/10mm
Dielectric Strength ¹	7,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 33Mtrs						

3M™ Electrical Insulation Tapes

3M 60 PTFE Film Tape

60 PTFE Tape is produced from a 0.051mm layer of PTFE coated on one side with a silicone thermosetting adhesive. This tough, strong and long lasting tape possesses excellent wear and abrasion resistance and has good electrical insulation characteristics. 3M 60 PTFE Tape is used in high temperature electrical applications that require high mechanical strength and good wear resistance. It is UL recognised for flame retardancy.



Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 33Mtrs

Typical Properties

Adhesive	Silicone Thermosetting
Backing	PTFE Film
Backing Thickness ¹	0.051mm
Total Thickness ¹	0.102mm
Temperature Class	180°C
Breaking Strength ¹	35 N/10mm
Elongation ¹	200%
Adhesion to Steel ¹	3.2 N/10mm
Dielectric Strength ¹	9,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M 61 PTFE Film Tape

Consisting of 0.125mm thick PTFE film and a silicone thermosetting adhesive, 3M 61 PTFE Tape is a thicker version of 60 Tape. This grade exhibits the same physical toughness, wear and abrasion resistance as 60 and also offer excellent electrical insulation performance. It is also UL recognised for flame retardancy and utilised in high temperature applications.



Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 33Mtrs

Typical Properties

Adhesive	Silicone Thermosetting
Backing	PTFE Film
Backing Thickness ¹	0.125mm
Total Thickness	0.178mm
Temperature Class	180°C
Breaking Strength ¹	79 N/10mm
Elongation ¹	300%
Adhesion to Steel ¹	3.8 N/10mm
Dielectric Strength ¹	15,000V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M 62 PTFE Film Tape

62 PTFE Tape is made from a 0.051mm PTFE film layer that is treated on one side with a silicone thermosetting adhesive. This grade is supplied on a liner and has a bondable backside which facilitates better adhesion to its own backing and better bonding of resins and varnishes. Used on high temperature coils and in other demanding electrical applications, this tape is otherwise eerily similar to 3M 60 PTFE Film Tape.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 33Mtrs						

Typical Properties

Adhesive	Silicone Thermosetting
Backing	PTFE Film
Backing Thickness ¹	0.051mm
Total Thickness ¹	0.102mm
Temperature Class	180°C
Breaking Strength ¹	35 N/10mm
Elongation ¹	200%
Adhesion to Steel ¹	3.2 N/10mm
Dielectric Strength ¹	9,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M 63 PTFE Film Tape

Like the PTFE tapes featured previously (#'s 60,61 & 62); 63 PTFE Film tape is made using a layer of PTFE film. What's different about this tape is the type of adhesive (acrylic). This adhesive type increases the solvent resistance of the bond but does limit the temperature rating to 155°C. As a result, this UL recognised (flame retardancy) tape is used where chemical resistance is more important than temperature rating.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 33Mtrs						

Typical Properties

Adhesive	Acrylic
Backing	PTFE Film
Backing Thickness ¹	0.051mm
Total Thickness ¹	0.088mm
Temperature Class	155°C
Breaking Strength ¹	35 N/10mm
Elongation	200%
Adhesion to Steel ¹	3.8 N/10mm
Dielectric Strength ¹	9,500V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M Scotch 22 Heavy Duty Electrical Tape

Scotch 22 is a premium grade PVC tape with a pressure-sensitive rubber adhesive. This tape offers good dielectric strength, high mechanical strength and protects against corrosion and abrasion. Used in a variety of low voltage applications as primary insulation, or secondary insulation in higher voltage environments, 3M 22 Electrical Tape carries a UL recognised temperature rating to 80°C.



Typical Properties

Adhesive	Pressure-Sensitive Rubber
Backing	Polyester Vinyl Chloride
Total Thickness ¹	0.25mm
Temperature Class (UL 510)	80°C
Breaking Strength ¹	35 N/10mm
Elongation ¹	200%
Adhesion to Steel ¹	2.2 N/10mm
Dielectric Breakdown ¹	12,000V
Insulation Resistance ¹	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Standard Widths (mm)

19	24	36	48
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Standard Length: 33Mtrs

3M Scotch 23 Electrical Tape

Scotch 23 is a self-fusing, high voltage electrical splicing tape with excellent conformability. This versatile ethylene propylene rubber tape is used as primary insulation in low voltage applications and as a sealing, protective layer on higher voltage apparatus.



Typical Properties

Total Thickness (ASTM-D4325)	0.75mm
Operating Temperature	90°C
Emergency Operating Temperature	130°C
Tensile Strength	1.4KN/m
Thermal Conductivity	0.1208 Btu
Fusion, ASTM D4388	Pass
Elongation (ASTM-D4325)	1000%
Ozone Resistance (ASTM-D4388)	Pass

Standard Widths (mm)

19	25	51
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Standard Length: 9Mtrs

3M Scotch Super 33+ Electrical Tape

A premium grade insulation tape manufactured from a PVC backing with a pressure-sensitive rubber adhesive Super 33+ Tape is designed for long lasting performance. This UL listed tape exhibits excellent resistance to abrasion, corrosion and a variety of chemicals. It is highly conformable, easy to apply and used as primary insulation in low voltage applications or as a protective/sealing outer layer in all weather conditions.



Typical Properties

Adhesive	Pressure-Sensitive Rubber
Backing	Poly Vinyl Chloride
Total Thickness ¹	0.178mm
Temperature Class (CSA)	105°C
Breaking Strength ¹	26 N/10mm
Elongation ¹	250%
Adhesion to Steel ¹	2.2 N/10mm
Dielectric Breakdown ¹	8,050V
Insulation Resistance ¹	<1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 33Mtrs						

3M Scotch 35 Electrical Tape

A high quality adhesive PVC colour coding tape 3M Scotch 35 provides excellent electrical and mechanical performance. This tape is used in a variety of electrical applications that include phase identification and motor lead coding as well as for various other engineering tasks. Available in 9 fade resistant colours, Scotch 35 meets UL standards for Flame Retardancy and is used in temperatures up to 105°C.



Typical Properties

Adhesive	Pressure-Sensitive Rubber
Total Thickness (ASTM-D4325)	0.178mm
Operating Temperature	105°C
Breaking Strength	30.3 N/10mm
Elongation	225%
Adhesion to Steel	2.2 N/10mm
Dielectric Breakdown	8,750V
High Humidity Insulation Resistance	>1 X 10 ⁶ megohms

Standard Colours

Blue, Red, White, Green, Yellow, Grey, Orange, Violet, Brown

Also available in slit rolls cut to whatever custom width you require.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 20Mtrs						

3M™ Electrical Insulation Tapes

3M Temflex 1610 Electrical Tape

An economical grade of general purpose insulating tape 3M Temflex 1610 is available in a selection of 10 different colours. This PVC tape has excellent resistance to abrasion, moisture, acid, alkalis and variable weather conditions as well as excellent conformability. It is usually used for lead or phase identification, area or pipe marking applications.

Typical Properties

Thickness ¹	0.15mm
Elongation ¹	200%
Breaking Strength ¹	18.5 kg/cm
Adhesion to Steel ¹	1.75 N/10mm
Dielectric Strength ¹	>39.4 kV/mm

¹ Test Method ASTM D-1000

Standard Colours

White, Black, Grey, Yellow, Red, Orange, Green, Blue, Brown, Green/Yellow



Standard Rolls: 18mm Wide x 20 Mtrs

3M Scotch 70 Self-Fusing Silicone Electrical Tape

A premium quality electrical insulation tape, 3M Scotch 70 provides excellent tracking, arc and ozone resistance along with high dielectric strength. This Class H (180°C) tape is very easy to use as it has excellent conformability and instantaneous fusion to itself. Scotch 70 Tape is used as an overwrap protection for a variety of different high voltage cables as well as primary insulation in some high temperature environments.

Typical Properties

Colour	Sky Blue Grey (Munsell 5BG7.0/0.4)
Thickness (ASTM-D-1000-76)	0.3mm
Tensile Strength (ASTM-D-1000-76)	21 N/10mm
Elongation (ASTM-D-1000-76)	450%
Dielectric Strength (ASTM-D-1000-76)	34 kV/mm
Arc Resistance (ASTM-D-495-71)	1 min. (minimum)
Operating Temperature	180°C



Standard Rolls: 25mm Wide x 9 Mtrs

3M™ Electrical Insulation Tapes

3M 12 Electrical Tape

A flatback paper tape with a thermosetting, pressure-sensitive rubber adhesive, 3M 12 Electrical Tape is used for the banding of coils and as a cover for bobbin-wound coils. This electrical insulation tape is easy to apply with high conformability and also exhibits good cushioning properties.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 55Mtrs						

Typical Properties

Adhesive	Thermosetting Rubber
Backing	Flatback Paper
Backing Thickness ¹	0.076mm
Total Thickness ¹	0.14mm
Temperature Class	105°C
Breaking Strength ¹	38.5 N/10mm
Adhesion to Steel ¹	4.4 N/10mm
Dielectric Breakdown ¹	2,000V
Insulation Resistance	>1 X 10 ⁶ megohms

¹ Test Method ASTM D-1000

Also available in slit rolls cut to whatever custom width you require.

3M 16 Crepe Paper Tape

3M 16 Crepe Paper Tape consists of a layer of crepe paper that's coated with a thermosetting rubber pressure sensitive adhesive. The crepe paper allows this insulation tape to offer excellent conformability for tight turns which leads to it being used as a coil cover and end-turn insulation on low temperature electrical apparatus.



Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 55Mtrs						

Typical Properties

Adhesive	Thermosetting Rubber
Backing	Crepe Paper
Total Thickness	0.228mm
Temperature Class	105°C
Breaking Strength	44 N/10mm
Adhesion to Steel	5.5 N/10mm
Dielectric Breakdown	2,500V
Insulation Resistance	>1 X 10 ⁶ megohms

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

3M Scotch 24 Electrical Shielding Tape

Manufactured from tinned copper conductors, Scotch 24 is an all-metal, open weave shielding tape in a flat, conformable form. This tape is oil, fire and corrosion resistant and unaffected by UV, ozone or moisture. It is used for shielding cable joints or to smooth the connector area in oil filled cables. The highly porous nature of Scotch 24 allows complete resin saturation and it is compatible with all HV splicing and termination materials.



Typical Properties

Thickness	0.406mm
Elongation (ASTM-D-1000-76)	70%
Weather Resistance	Pass
Electrical Resistance (ASTM D-1373-67)	Pass
Wire Size	2 X No. 36 AWG Tinned Copper Wires
Ozone Resistance (ASTM-D-1373-67)	Pass
Water Absorption	Nil

Standard Rolls: 25mm Wide x 4.5Mtrs

3M 40PR Anti-Static Utility Tape

A highly specialised tape designed for static-controlled environments. 3M 40PR Tape consists of a thin polyester film layer with an acrylic adhesive that generates very low levels of triboelectric charge when it is unwound from the roll or removed from most surfaces. This tape is generally used in specialised engineering, research and manufacturing environments where any static charge may damage sensitive equipment.



Typical Properties

Thickness ¹	0.055mm
Adhesion to Steel ¹	16 N/100mm
Operating Temperature	130°C
Printed	Yes

¹ Test Method ASTM D-1000

Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 66Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M™ Electrical Insulation Tapes

Tape Selection Table

Tape #	Backing	Adhesive	Maximum Temperature	Overall Thickness	Colour	Custom Slit Widths?
5	Polyester	Acrylic PSA	130°C	0.063mm	Transparent	Yes
56	Polyester	Thermosetting Rubber	130°C	0.058mm	Yellow	Yes
74	Polyester	Thermosetting Rubber	130°C	0.02mm	Yellow	Yes
44	Composite Polyester Film	Thermosetting Rubber	130°C	0.139mm	Tan	Yes
27	Glass Cloth	Thermosetting Rubber	150°C	0.177mm	White	Yes
69	Glass Cloth	Silicone Thermosetting	200°C	0.177mm	White	Yes
11	Acetate Cloth	Thermosetting Rubber	105°C	0.178mm	Black	Yes
92	Polyimide Film	Silicone Thermosetting	180°C	0.076mm	Dark Brown	Yes
60	PTFE Film	Silicone Thermosetting	180°C	0.102mm	Brown	Yes
61	PTFE Film	Silicone Thermosetting	180°C	0.178mm	Brown	Yes
62	PTFE Film	Silicone Thermosetting	180°C	0.102mm	Brown	Yes
63	PTFE Film	Acrylic	155°C	0.088mm	Brown	Yes
22	PVC	Rubber	80°C	0.25mm	Black	No
23	Rubber	Self-Fusing	90°C	0.75mm	Black	No
33+	PVC	Rubber	105°C	0.178mm	Black	Yes
35	PVC	Rubber	105°C	0.178mm	Various	Yes
1610	PVC	Acrylic	-	0.15mm	Various	No
70	Silicone	Self-Fusing	180°C	0.3mm	Silver Grey	No
12	Flatback Paper	Thermosetting Rubber	105°C	0.14mm	Tan	Yes
16	Crepe Paper	Thermosetting Rubber	105°C	0.228mm	Tan	Yes
24	Tinned Copper	None	-	0.406mm	Silver	No
40PR	Printed Polyester	Acrylic	130°C	0.055mm	Semi-Transparent	Yes

3M™ EMI Shielding Tapes

3M 1170 Aluminium Foil Tape with Conductive Adhesive

Manufactured from a 1-ounce, dead-soft aluminium foil backing combined with a unique electrically conductive acrylic pressure-sensitive adhesive, 3M 1170 Tape exhibits excellent electrical conductivity. It is typically used for grounding and EMI shielding applications where current transfer through a tapes' adhesive to the foil backing is of high importance.



Typical Properties

Backing Thickness	0.05mm
Total Thickness	0.081mm
Breaking Strength (ASTM-D-1000)	35 N/10mm
Adhesion to Steel (ASTM-D-1000)	3.8 N/10mm
Electrical Resistance through Adhesive ²	0.010 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 16.46Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M 1181 Copper Foil Tape with Conductive Adhesive

3M 1181 Tape is manufactured from a 1-ounce, dead-soft copper foil backing layer coated on one side with a specialised conductive acrylic adhesive. This tape exhibits excellent electrical conductivity right through the adhesive and onto the copper foil. This copper backing is solderable and resists oxidation and discoloration.



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.066mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	3.8 N/10mm
Electrical Resistance through Adhesive ²	0.005 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)

6	9	12	15	18	21	24
---	---	----	----	----	----	----

Standard Length: 16.46Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M™ EMI Shielding Tapes

3M 1182 Copper Foil Tape with Conductive Adhesive on Both Sides

3M 1182 Tape is produced from the same copper foil backing used in 1181 but features a conductive acrylic adhesive on both sides. 3M 1182 is typically used for bonding two surfaces together both electrically and physically. This tape exhibits excellent electrical conductivity and is supplied with a removable liner on both sides of the tape,



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.088mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	3.8 N/10mm
Electrical Resistance through Adhesive ²	0.010 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 16.46Mtrs						

Also available in slit rolls cut to whatever custom width you require.

3M 1183 Tin Plated Copper Tape with Conductive Adhesive

Produced from a 1-ounce, dead-soft layer of tin plated copper foil 3M 1183 is an electrically conductive tape with excellent solderability. This tape features a specialised adhesive with excellent electrical conductivity and also has an easy release liner for simple application. It is typically used for EMI shielding applications and, in particular, where this tin plated tapes ability to be soldered is of benefit.



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.066mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	3.8 N/10mm
Electrical Resistance through Adhesive ²	0.005 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 16.46Mtrs						

Also available in slit rolls cut to whatever custom width you require.

3M™ EMI Shielding Tapes

3M 1194 Copper Foil Tape with Non-Conductive Adhesive

3M 1194 Tape is manufactured from a 1-ounce, dead-soft layer of copper foil that is coated on one side with a non-conductive acrylic adhesive and finished with a removable liner. This economical grade of shielding tape is typically used for bonding, ground and EMI shielding applications. The copper foil backing used in this tape can be soldered and resists both oxidation and discolouration.



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.066mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	4.4 N/10mm
Flame Retardancy (UL recognised)	Pass

Standard Widths (mm)

6	9	12	15	18	21	24
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Standard Length: 33Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M 1245 Embossed Copper Foil Tape

A highly specialised grade of EMI tape with outstanding conductivity. 3M 1245 Tape is manufactured from a 1-ounce, dead-soft copper foil backing with an aggressive, pressure sensitive acrylic adhesive. To enable conductivity through the adhesive, an embossed pattern is pressed into the copper in such a way as the copper foil cuts through the adhesive which allows this tape to establish reliable metal-to-metal contact.



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.101mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	3.8 N/10mm
Electrical Resistance through Adhesive ²	0.001 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)

6	9	12	15	18	21	24
---	---	----	----	----	----	----

Standard Length: 16.46Mtrs

Also available in slit rolls cut to whatever custom width you require.

3M™ EMI Shielding Tapes

3M 1345 Embossed Tin-Plated Copper Foil Tape

3M 1345 Tape is manufactured using a embossed 1-ounce, dead-soft tin-plated copper foil backing with an aggressive, pressure-sensitive acrylic adhesive. Like 1245 tape, 1345 features an embossed pattern that has been pressed into the foil backing causing it to cut through the adhesive layer. This allows 1345 tape to provide outstanding electrical conductivity and true metal-to-metal contact between tape and substrate.



Typical Properties

Backing Thickness	0.04mm
Total Thickness	0.101mm
Breaking Strength (ASTM-D-1000)	44 N/10mm
Adhesion to Steel (ASTM-D-1000)	4.9 N/10mm
Electrical Resistance through Adhesive ²	0.001 ohm
Flame Retardancy (UL recognised)	Pass

² MIL-STD-202 method 307 maintained at 3.4 N/cm² measured over 1 in² surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

Standard Widths (mm)						
6	9	12	15	18	21	24
Standard Length: 16.46Mtrs						

Also available in slit rolls cut to whatever custom width you require.

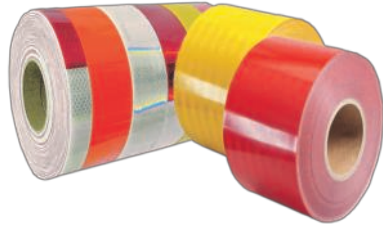
3M™ EMI Shielding Tapes Selection Table

Tape #	Backing	Adhesive	Electrical Resistance Through Adhesive	Backing Thickness	Overall Thickness
1170	Aluminium Foil	Conductive Pressure Sensitive Acrylic	0.010 ohm	0.05mm	0.081mm
1181	Copper Foil	Conductive Pressure Sensitive Acrylic	0.005 ohm	0.04mm	0.066mm
1182	Copper Foil	Conductive Pressure Sensitive Acrylic	0.010 ohm	0.04mm	0.088mm
1183	Tin Plated Copper Foil	Conductive Pressure Sensitive Acrylic (Both Sides)	0.005 ohm	0.04mm	0.066mm
1194	Copper Foil	Pressure Sensitive Acrylic	N/A	0.04mm	0.066mm
1245	Embossed Copper Foil	Pressure Sensitive Acrylic	0.001 ohm	0.04mm	0.101mm
1345	Embossed Tin Plated Copper Foil	Pressure Sensitive Acrylic	0.001 ohm	0.04mm	0.101mm

Other 3M™ Tapes from AG

3M™ Reflective Tapes

Known for their quality, high specifications and extreme longevity, 3M Reflective Tapes are used in critical safety applications all over the world. AG is pleased to offer a variety of different grades of 3M Reflective Tapes coupled with the ability to provide them in custom slit rolls as well as precision die-cut, knife-cut or kiss-cut shapes and components.



3M™ Double Sided Transfer Tapes

AG stocks a large selection of different grades of double sided transfer tapes enabling you to select the very best product for your application. Available styles include 3M 467MP, 468MP, 9471, 9472, 9473MP, 9671 and 9672 which together offer a variety of liners, adhesives and staying power as well as variable UV, chemical and aging resistance. All can be provided in whatever width is required.



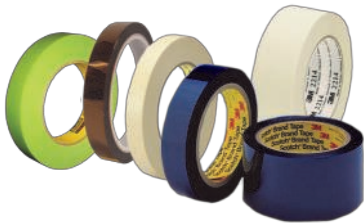
3M™ VHB™ Tapes

By combining 3M's outstanding adhesive technology with high quality grades of compressible foams; the 3M VHB Tape range offers outstanding bonding power and versatility. These high performance, double sided tapes can compensate for non-perfectly parallel surfaces and exhibit excellent compatibility with a variety of surfaces. 3M VHB Tapes are offered in slit rolls and cut components by AG.



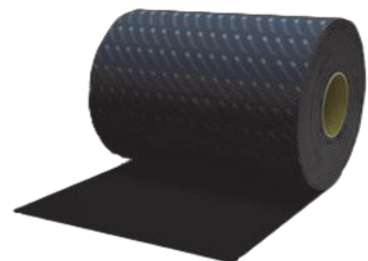
3M™ Masking Tapes

Specially engineered for demanding industrial applications, 3M Masking Tapes offer outstanding performance. This range includes styles with easy application, long lasting weather resistance, chemical resistance and the ability to be used in high temperatures. Like many of the tapes in this brochure, AG's 3M Masking Tapes are offered in a full selection of custom slit widths.



3M™ Bumpon Tapes and Components

Featuring excellent skid and abrasion resistance along with a high coefficient of friction and good vibration and shock dampening; 3M Bumpon products are perfect for all kinds of protective requirements. AG offers a selection of grades from this range of long lasting products each with their own characteristics. For more information on the styles available, or our ability to cut, slit or fabricate the exact Bumpon product you require, please contact your local AG.



Other Electrical Tapes from AG

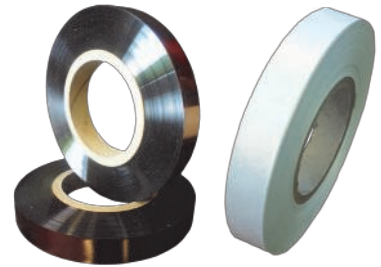
Arlon Silicone Insulation Tapes

Arlon Silicone Technologies is a world leader in the production of high voltage insulation tapes and silicone self fusing tapes. AG is proud to offer these exceptional quality Arlon Tapes in a range that includes our SLW Silicone Self-Fusing Tape, MOX-Tape, Glass Reinforced Silicone Rubber Tape and many, many more.



DuPont™ Tapes

Including trusted products like genuine DuPont Kapton® and DuPont Nomex®, AG's range of DuPont Tapes covers all common grades and styles needed for high voltage electrical insulation applications. The vast majority of these tapes are available in a wide selection of thicknesses and can be slit to custom widths by AG.



Fibertek Tapes

Fibertek Tapes are high voltage insulation tapes designed for maximum dielectric performance. This range includes our Fibertek Res-I-Glas Banding Tape and Res-I-Flex Armor Tape which are both available in a selection of grades, thicknesses, widths and lengths.



Isovolta Tapes

Isovolta is a world leader in the manufacture of high quality, high voltage electrical insulation materials. As their official partner, AG is pleased to offer a comprehensive range of Isovolta Tapes. This range includes the Feinmicaglas, Calmicaglas, Poroband and many other grades of premium electrical insulation tapes designed to perform in demanding environments and applications.



Other Film & Glass Insulation Tapes

In addition to those listed above, AG offers a number of other grade of electrical insulation tapes. These include numerous styles of adhesive PVC tapes as well as adhesive polyester, crepe paper and crepe Nomex®, adhesive Polyimide, adhesive glass and many, many more. Almost all of these high performance grades of can be provided in whatever width you require with many also available in a selection of thicknesses, colours, styles or grades.



Other Woven Electrical Insulation Tapes

Encompassing all of the other grades of electrical woven tapes AG has to offer (which is a lot); AG's Other Woven Electrical Tapes section includes a wide variety of high quality electrical insulation tapes. This section features woven glass tape, woven polyester tape, woven shrink tape, woven glass / polyester tape and varnished glass insulation tapes in a complete range of sizes, styles, core diameters and more.





Associated Gaskets



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