



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Science.
Applied to Life.™



**Bringing
better ideas
to the surface.**

Bringing Better Ideas to the Surface through Science & Innovation

In the 3M Industrial Adhesives and Tapes Division, we apply the science of adhesion to deliver innovative solutions that improve the design and manufacturing processes of companies around the world. In the end, our technologies help customers like you deliver competitive products to the market faster and more efficiently.

Whether you're looking to protect, mask, enhance or otherwise modify surfaces to improve the appearance, function or productivity of your products or processes, this guide will show you what you need to get the job done right.

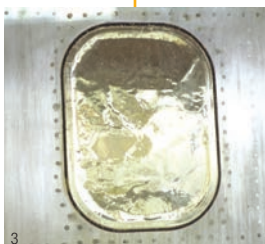
Solutions through Service

3M sales representatives are located across the globe. For technical service, a highly trained team can help you evaluate tapes for specific applications. In addition, our national authorized distributor network provides sales assistance and local product availability. Authorized converters can also help you adapt 3M tapes to meet your special requirements.



3M Masking and Specialty Products

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Selecting the Right Product for the Job

To help you make sure you find the optimum 3M tape or other adhesive-backed product for your particular application, you'll want to consider several factors:

- Backing material
- Adhesive type
- Application time and temperature
- Surface characteristics (e.g., roughness, surface energy, contours, etc.)
- End use conditions (e.g., temperature, UV exposure, abrasion, etc.)

The following selection guides integrate those factors to help you narrow your selection to fewer products for a more in-depth evaluation.

3M Backing Materials

In many applications, 3M backings add a second surface that affects how the underlying surface relates to the environment. To optimize that relationship, 3M backings offer a wide choice of performance and handling characteristics.

PAPER BACKING	Crepe	Conformable, easy tear
	Flatback	Strong, smooth, good for straight line masking
	Kraft	Strong, some versions are repulpable
	Tissue	Thin, porous to allow adhesive penetration of sheet
PLASTIC BACKING	Polyester	Strong even when thin, chemical resistant, high temperature resistance
	Polypropylene	Resistant to most solvents, conformable, tear resistant
	Polyethylene	Conformable, easy to stretch, chemical/acid/moisture resistant, economical
	Polyethylene/Polypropylene Co-polymer	Conformable, chemical/acid/moisture resistant
	UHMW-PE	High abrasion resistance, low coefficient of friction, anti-stick surface easy to clean
	Polyvinyl Chloride (Vinyl)	Conformable, abrasion resistant, resistant to most chemicals
	Polyimide	High temperature resistance, excellent dimensional stability, good chemical resistance
	Polyamide (Nylon)	High temperature resistance, high strength and toughness, good chemical resistance but can absorb moisture
	Polytetrafluoroethylene (PTFE)	Low coefficient of friction, excellent high temperature and chemical resistance, anti-stick/release properties
	Polyvinyl Alcohol (PVA)	Water-soluble, organic solvent resistant, high temperature resistance
	Polyurethane	Abrasion/scratch resistant, impact/puncture resistant, UV and corrosion resistant
Polyvinyl Fluoride	Excellent weather resistance, excellent long-term UV resistance, thin yet stiff feel	
CLOTH BACKING	Cotton	Strong, easy tear by hand, soft and drapable
	Glass Cloth	Strong, high temperature resistance, flame-resistant
	Vinyl Coated	Strong yet hand tearable, abrasion resistant, water-resistant, conformable
NON-WOVEN BACKING	Fiber	Air permeable, strong enough to hold expanding foams
METAL BACKING	Aluminum	Heat and light reflective, moisture and chemical resistant, flame-resistant, outdoor weather resistant, conformable
	Copper	EMI/RFI shielding
	Lead	Electrically conductive, acid resistant, high conformability, x-ray opacity
	Stainless Steel	Corrosion resistant
RUBBER BACKING	Neoprene	Abrasion resistant, die-cuttable
COMBINATION (LAMINATES) BACKING	Paper/Polyethylene	Weather and chemical resistant, hand tearable, stretch resistant
	Metalized/Polyester	Reflective, decorative
	Glass Cloth/PTFE	High temperature resistance, high strength
	Glass Cloth/Aluminum	Very high temperature resistance, high strength
	Non-Woven/Aluminum	High heat and cold resistance
	Polyethylene Over Cloth	Strong yet hand tearable, abrasion resistant, water resistant and conformable.

3M Pressure Sensitive Adhesives

Most of the products in this guide feature a 3M pressure sensitive adhesive that bonds the backing to another surface on contact. Each adhesive has different characteristics that affect production and end use performance.

RUBBER ADHESIVE	STANDARD ACRYLIC ADHESIVE	MODIFIED ACRYLIC ADHESIVE	SILICONE ADHESIVE
High initial bond	Moderate initial bond	Bonds to wider variety than standard acrylic	Fair initial bond
Softer	Firmer	Softer	Very firm
Widest variety of surfaces including low surface energy materials*	High surface energy*	Many surfaces	Fewer surfaces
Up to 350°F (177°C)	Up to 450°F (232°C)	Up to 300°F (149°C)	Up to 600°F (316°C), excellent low temperature performance
Fair chemical resistance	Excellent chemical resistance	Good chemical resistance	Excellent chemical resistance
Fair UV resistance	Excellent UV resistance	Moderate UV resistance	Excellent UV resistance
Poor aging	Excellent aging	Durable	Excellent aging
Removable	Permanent	Various	Removable
Good solvent resistance	Excellent solvent resistance	Good solvent resistance	Excellent solvent resistance

*Surface energy ranges from high to low. To illustrate the concept of surface energy, think of water on the unwaxed hood of a car. The unwaxed hood has high surface energy and water on the hood flows into puddles. In comparison, a waxed hood has low surface energy and the water beads up rather than flows out. Similar to water, adhesive on a high surface energy surface flows and "wets out" the surface. "Wetting out" is required to form a strong bond.

As a rule of thumb, the higher the surface energy, the greater the strength of adhesion. Specially formulated adhesives are available for low surface energy surfaces. Regardless of surface energy, the substrate must be unified, dry, and clean to maximize adhesive contact.

The following illustrations and surface rankings give you an idea of relative surface energy.

Metal Surfaces (High Surface Energy)

High Surface Energy Plastics (HSE)

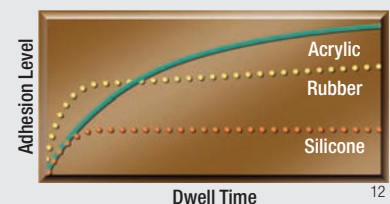
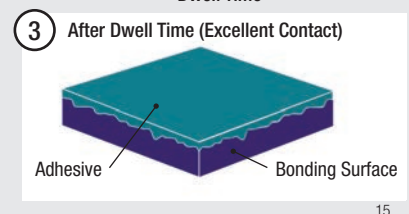
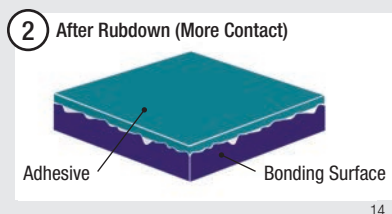
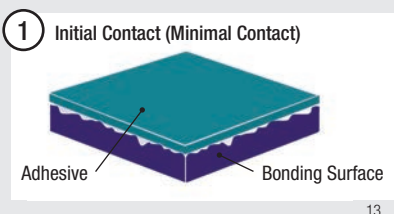
Low Surface Energy Plastics (LSE)

mJ/m ²	Surfaces	mJ/m ²	Surfaces	mJ/m ²	Surfaces	mJ/m ²	Surfaces
1103	Copper	43	Polyurethane Paint	37	PVA		
840	Aluminum	42	ABS	36	Polystyrene		
753	Zinc	42	Polycarbonate	36	Acetal		
526	Tin	39	PVC Rigid	33	EVA		
458	Lead	38	Modified PPE Resin	31	Polyethylene		
700–1100	Stainless Steel	38	Acrylic	29	Polypropylene		
250–500	Glass	43	Epoxy Paint	28	Polyvinyl Fluoride Film		
				18	PTFE Fluoropolymer		

Note: These values are provided as a guide. Formulation modifications can substantially alter surface energies.

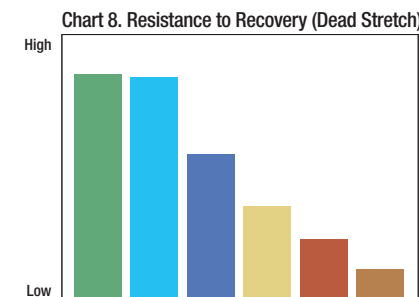
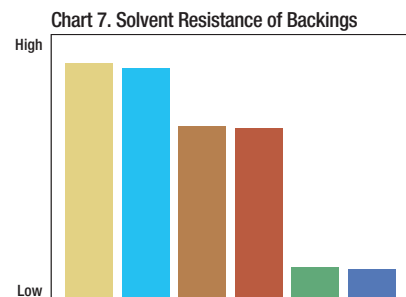
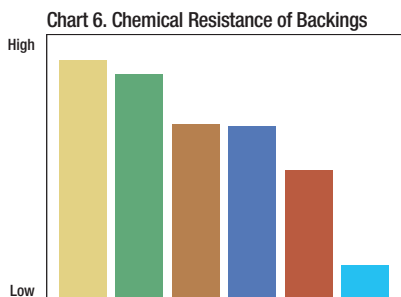
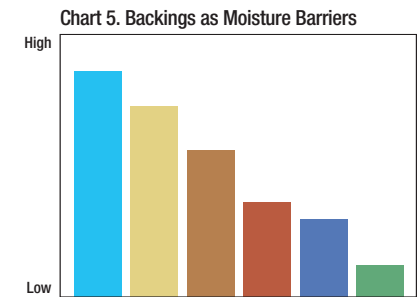
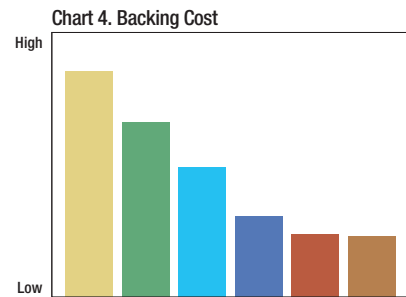
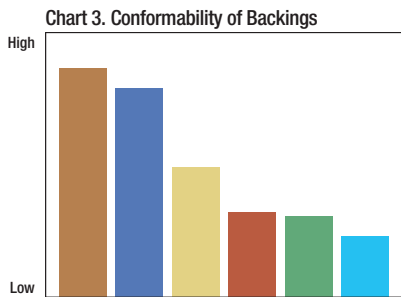
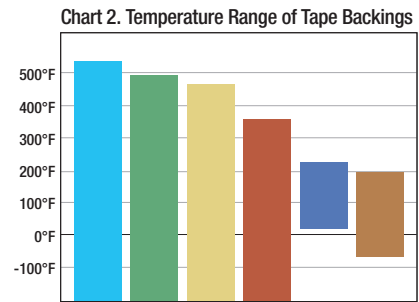
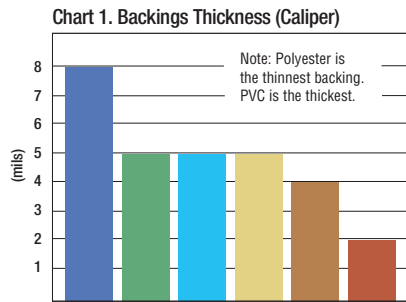
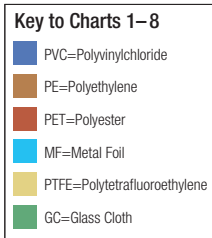
Adhesive Surface Contact

Applying firm pressure to the bond increases adhesive flow and contact for more secure bonding. Time and temperature will typically further increase contact and adhesion values.



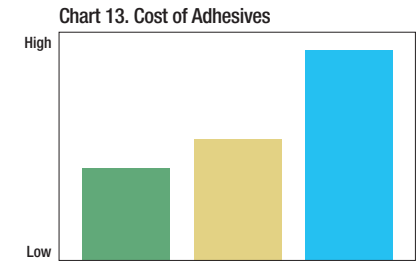
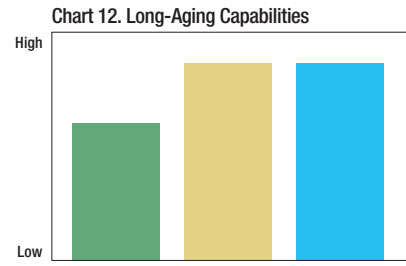
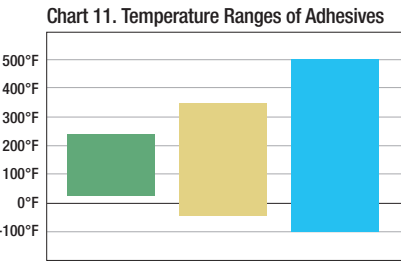
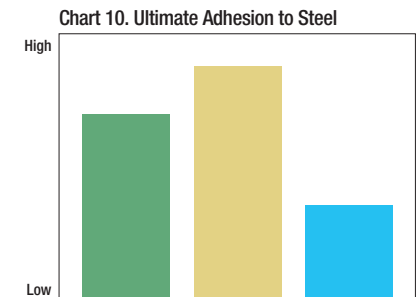
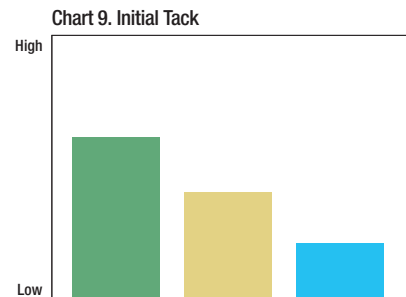
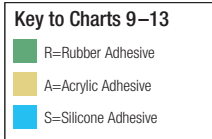
3M™ Specialty Tapes Backing and Adhesive Selection Guide

To help select the **TAPE BACKING** for your application, consult the following charts. Each backing is rated in eight critical categories.



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To help select the **ADHESIVE** for your application, consult the charts below. Each adhesive is rated in five critical categories.



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Note: The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

Masking, Duct and Flatback Tapes

Practical tape solutions.

Tapes that hold firm, yet remove easily.

To get the job done right the first time, you need to use the right tools. That's why we offer a full lineup of industrial tapes with unmatched dependability. From tapes that withstand extreme temperatures to tapes that remove cleanly in UV conditions, you can trust 3M to help you get the job done right.

3M™ Industrial Masking Tapes

Now It's Easy to Choose the Best Tape to Get the Job Done Right

To win in today's highly competitive marketplace, you need the right tools. And that includes your masking tapes. So 3M has created a simple, 5-tape system to help you choose the right tape for your job.

Five tapes, built on increasing levels of performance and a common goal of helping you finish jobs worth finishing.

It's industrial masking made simple.



3M™ Masking Tapes 101+, 201+, 301+, 401+ and 501+.



Consider 301+ for general purpose, low to medium temperature applications up to 225°F (107°C).



Consider 401+ for critical masking applications with temperatures up to 250°F (121°C).



Consider 501+ for bake temperatures up to 300°F (149°C) or for multiple bake cycles.

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Can be Certified to Specification	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759				
101+	Tan	Rubber	Crepe Paper	5.1 (0.13)	34 (37)	22 (385)	9	150 (66)	30	—	Indoor use. Light-duty applications.
201+	Tan	Solvent-Free Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	General indoor use. Light-to-medium duty. Clean removal.
301+	Yellow	Solvent-Free Rubber	Crepe Paper	6.3 (0.16)	30 (33)	22 (385)	12	225 (107)	30	—	Good conformability to irregular surfaces. Good paint lines.
401+	Green	Solvent-Free Rubber	Crepe Paper	6.7 (0.17)	36 (39)	25 (438)	10	250 (121)	30	—	Highly conformable to many surfaces. Superior adhesion to metal, rubber, glass and plastic. Great paint lines.
501+	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
501+	Purple	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	37 (40)	31 (543)	11	300 (149)	30	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.

Note: The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

Scotch® Fine Line Masking Tapes

Line Sharpness and Removal the Way You Want

With a core capability of coating technology, 3M combines paper or film backings with different adhesives for demanding applications.

- Sharpest possible paint lines
- Conformability to stretch and adhere around sharp curves
- Film or vinyl backings flex easily for creating curved paint edges
- Resist edge lifting



With blue vinyl backing and rubber adhesive, Scotch® Fine Line Masking Tape 4737T offers best-in-class conformability and line sharpness for curves in high value processes.



A combination of Scotch® Fine Line Masking Tape and 3M™ Crepe Masking Tape helps to create sharp, high-impact paint lines on an in-mold application in the marine industry.



Also consider Scotch® Fine Line Tape 265 for difficult to stick to surfaces, such as semi-perm mold release surfaces.

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (minutes)	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759			
215	Blue	Rubber	Polyethylene/ Polypropylene Co-polymer	4.8 (0.12)	43 (47)	15 (263)	1150	250 (121)	30	Medium temperature. Excellent conformability.
218	Green	Rubber	Polypropylene	5.0 (0.13)	37 (40)	13 (228)	720	250 (121)	30	Good for long, straight lines.
265	Green	Rubber/ Silicone	Polypropylene	5.1 (0.13)	21 (23)	21 (368)	881	200 (93)	30	In-mold composite masking where sharp, clean, gel-coat color separation lines are desired.
2460	Gold	Acrylic	Flatback Paper	3.3 (0.08)	8 (8.7)	17 (297)	5	300 (149)	30	For paint bake operations at temperatures up to 300°F (149°C). 21 days outdoor.
4735	Orange	Rubber	Vinyl	5.4 (0.14)	9.5 (10.4)	14 (245)	130	300 (149)	30	Highly conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.
4737T	Translucent Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	300 (149)	30	Conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.
4737S	Solid Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	300 (149)	30	Highly visible backing version of 4737T.
4737TL	Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	325 (163)	30	Lined version of 4737T.

Note: The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

3M™ Masking Tapes — Crepe Paper

Holding Power and Removal the Way You Want

In this simplified line, you will find a range of such characteristics as adhesive holding power, line sharpness, and clean removal to meet different application requirements for virtually every industrial and consumer application. 3M products also feature:

- Instant adhesion at a touch
- Easy tear without stretching or pulling
- Controlled unwind...not too easy or too hard
- Conformability to stretch and adhere around curves



With the wide variety of 3M™ Masking Tapes, you can select from a variety of backings, adhesion strengths, clean removal properties, and temperature range performance.



Use 3M™ Value Masking Tape 101+ for light-duty attaching.



Use 3M™ General Masking Tape 201+ to quickly bundle parts.



3M™ Performance Yellow Masking Tape 301+ is ideal for labeling and identifying applications.

Learn more about Sustainable Solutions from 3M online at [3M.com/sustainability](https://www.3M.com/sustainability)

3M™ Masking Tapes — Crepe Paper

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Can be Certified to Specification	Cross Reference	Comments
ASTM Test Method:				D-3652	D-3330	D-3759	D-3759					
Industrial Masking Tapes												
101+	Tan	Rubber	Crepe Paper	5.1 (0.13)	34 (37)	22 (385)	9	150 (66)	30	—	—	Indoor use. Light-duty applications.
201+	Tan	Solvent-Free Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	—	General indoor use. Light-to-medium duty. Clean removal.

Note: The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

3M™ Masking Tapes — Crepe Paper

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Can be Certified to Specification	Cross Reference	Comments
ASTM Test Method:				D-3652	D-3330	D-3759	D-3759					
Industrial Masking Tapes												
301+	Yellow	Solvent-Free Rubber	Crepe Paper	6.3 (0.16)	30 (33)	22 (385)	12	225 (107)	30	—	—	Good conformability to irregular surfaces. Good paint lines.
401+	Green	Solvent-Free Rubber	Crepe Paper	6.7 (0.17)	36 (39)	25 (438)	10	250 (121)	30	—	—	Highly conformable to many surfaces. Superior adhesion to metal, rubber, glass and plastic. Great paint lines.
501+	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
501+	Purple	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	37 (40)	31 (543)	11	300 (149)	30	—	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
General Purpose Masking Tapes												
200	Tan	Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	201+	Good instant adhesion.
202	Tan	Rubber	Crepe Paper	6.3 (0.16)	37 (41)	27 (472)	8	250 (121)	30	ASTM D 6123; D 6123M-97	401+	Good holding power.
203	Beige	Rubber	Crepe Paper	4.7 (0.12)	28 (31)	22 (385)	8	200 (93)	30	—	201+	General purpose masking tape for holding, bundling, sealing and more.
213	Tan	Rubber	Crepe Paper	6.0 (0.15)	34 (37)	27 (480)	10	350 (177)	30	ASTM D 6123; D 6123M-97	—	Good on anodized aluminum.
214	Tan	Rubber	Crepe Paper	5.8 (0.15)	29 (32)	27 (480)	10	350 (177)	60	ASTM D 6123; D 6123M-97	—	Stain resistant.
225	Silver	Rubber	Crepe Paper	5.8 (0.15)	33 (36)	21 (368)	9	200 (93)	30	—	—	Outdoor use.
226	Black	Rubber	Polyethylene/Crepe Paper	10.6 (0.27)	38 (42)	34 (595)	11	225 (107)	30	—	—	Outdoor use.
231/231A	Tan	Rubber	Crepe Paper	7.6 (0.19)	38 (41)	28 (490)	10	300 (149)	30	ASTM D 6123; D 6123M-97	501+	Best all-purpose paint masking tape.
232	Tan	Rubber	Crepe Paper	6.3 (0.16)	37 (41)	27 (472)	8	250 (121)	30	—	401+	Good paint lines.
234	Tan	Rubber	Crepe Paper	5.9 (0.15)	34 (37)	27 (472)	8	250 (121)	30	ASTM D 6123; D 6123M-97	401+	Excellent controlled unwind.
2214	Tan	Rubber	Crepe Paper	5.4 (0.14)	22 (24)	23 (403)	10	200 (93)	30	—	101+	Good for holding and bundling.
2307	Tan	Rubber	Crepe Paper	5.2 (0.13)	28 (31)	23 (403)	8	200 (93)	30	—	301+	Solvent-free construction, non-critical paint masking.
2308	Tan	Rubber	Crepe Paper	5.3 (0.13)	35 (38)	22 (385)	10	250 (121)	30	—	301+	Good transfer resistance.
2364	Tan	Rubber	Crepe Paper	6.5 (0.17)	31 (34)	24 (427)	10	300 (149)	30	ASTM D 6123; D 6123M-97	501+	High temperature, crepe paper masking tape for general masking application. Good holding power.
2380	Tan	Rubber	Crepe Paper	7.2 (0.18)	39 (43)	28 (498)	10	325 (163)	30	ASTM D 6123; D 6123M-97	501+	High temperature. Best holding to widest variety of surfaces.
2393	Tan	Rubber	Crepe Paper	7.6 (0.19)	32 (36)	28 (490)	11	325 (163)	30	ASTM D 6123; D 6123M-97	—	Smooth, heavy duty, high temperature masking tape.
2510	Black	Rubber	Crepe Paper	5.6 (0.14)	35 (37)	20 (350)	9	200 (93)	60	ASTM D 6123; D 6123M-97	—	General purpose masking tape for holding, bundling, sealing and general paint masking where a dark colored tape is required.
2693	Tan	Synthetic Rubber	Crepe Paper	7.9 (0.20)	40 (44)	29 (515)	10	325 (163)	30	ASTM D 6123; D 6123M-97	501+	Very aggressive holding; excellent for multi-bake paint cycles.
5501A	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	501+	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.

Note: The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

3M™ Duct Tapes and Cloth Tapes

Dependability and Versatility for Bundling, Sealing, Reinforcing and More

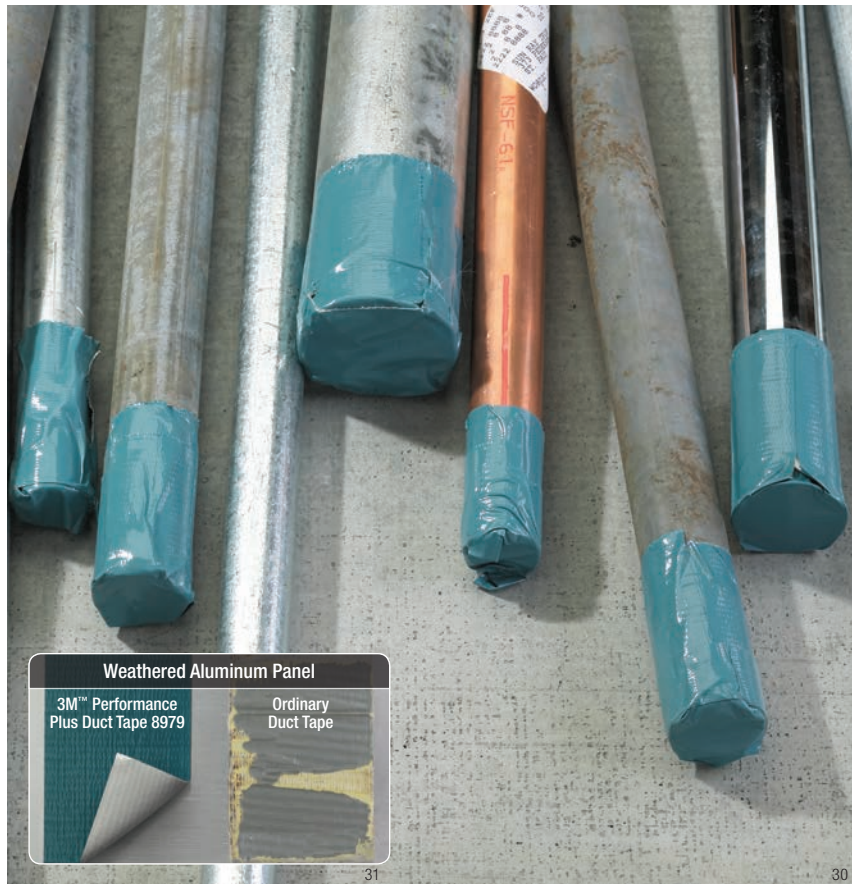
This family of rugged cloth and duct tapes adheres to most surfaces for applications ranging from bundling to moisture proofing, sealing to splicing, reinforcing to hanging poly drapes. Features include:

- Hand tearable
- High tensile strength
- Conformability

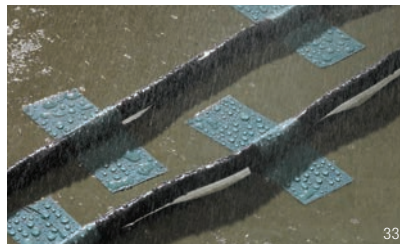
Latest innovation in the line — clean removal plus long life indoors and out

The line includes 3M™ Performance Plus Duct Tape 8979 and nuclear grade 8979N. The best performing 3M™ Duct Tapes under the sun:

- Remove cleanly for up to six months from most opaque surfaces even after exposure to sun and outdoor weathering
- Stay on for up to one year without deterioration
- Save time and hassle of removing sticky or dried-on residue
- Strong waterproof backing resists wear, abrasion, moisture, and weathering



3M™ Duct Tapes are available in a variety of colors for color coding. A range of widths provides choices in coverage from 24mm to 22 inches.



Waterproof backing of 3M™ Performance Plus Duct Tape 8979 resists moisture and rain for up to a year.



Write on the surfaces of many 3M™ Duct Tapes with pen or marker to leave a reminder or mark and identify works-in-progress, components, items bundled and more.



For a tight seal in many containment situations, 3M™ Performance Plus Duct Tape 8979 attaches heavy poly draping, closes cuffs, and then removes cleanly when the job is finished.



Strong backing of 3M™ Outdoor Masking and Stucco Tape 5959 pulls through stucco, EIFS and other heavy coatings in one piece.



For bundling a wide variety of items, 3M™ Duct Tapes with natural rubber adhesive and high tensile strength backings adhere on contact and hold securely.

3M™ Duct Tapes and Cloth Tapes

Product Number	Color	Adhesive Type	Backing Material	Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Meets Specifications	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759			
Clean Removal Duct Tapes										
8979	Blue, Black, Olive	Rubber	Polyethylene Over Cloth Scrim	12.1 (0.31)	48 (53)	36 (630)	19	200 (93)	UL 723/ASTM E84	Up to six months clean removal from most opaque surfaces indoors and outdoors.
8979N	Red, Blue	Rubber	Polyethylene Over Cloth Scrim	12.1 (0.31)	48 (53)	36 (630)	19	200 (93)	UL 723/ASTM E84/MIL-STD-2041D	Same features as 8979, plus low halogen and sulfur.
5959	Red	Rubber	Polyethylene Over Cloth Scrim	12.0 (0.30)	53 (58)	35 (613)	21	200 (93)	UL 723/ASTM E84	High tensile strength backing protects against stucco, EIFS and other heavy coatings. 3 months outdoors.
5903	Red	Synthetic Rubber	Polyethylene	7.5 (0.19)	79 (87)	21 (368)	72	173 (78)	—	UV and weather resistant for outdoor masking, holding, patching, bundling, marking and more. 30 day removal.
Professional Grade Duct Tapes										
DT11	Silver, Black	Natural Rubber	Polyethylene Film Over Cloth Scrim	11.0 (0.27)	58 (63.4)	35 (613)	12	200 (93)	—	Provides easy tear and good conformability. Great for holding, sealing and packaging.
2979	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	7.4 (0.29)	79 (86)	24 (430)	21	200 (93)	—	Use for a variety of duct tape applications.
3900	Black, Blue, Olive, Red, Silver, White, Yellow	Rubber	Polyethylene Over Cloth Scrim	7.6 (0.19)	53 (58)	28 (490)	19	200 (93)	—	General purpose duct tape, temporary repairs, color-coding.
3939	Silver	Rubber	Polyethylene Over Cloth Scrim	8.6 (0.22)	55 (60)	25 (438)	17	200 (93)	UL 723/ASTM E84	Use for demanding duct tape applications.
3979	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	7.9 (0.31)	68 (74)	32 (560)	26	200 (93)	—	Use for a variety of duct tape applications.
6969	Olive, Silver, Black	Rubber	Polyethylene Over Cloth Scrim	10.0 (0.25)	51 (56)	34 (595)	16	200 (93)	UL 723/ASTM E84	Industrial grade duct tape, thick adhesive layer sticks to rough surfaces.
Utility Duct Tapes										
DT8	Silver	Synthetic Rubber	Polyethylene Film Over Cloth Scrim	8.0 (0.2)	100 (109.4)	31 (542)	21	200 (93)	—	Provides easy tear and good conformability. Great for sticking to metal, glass, plastic and sealed concrete.
3903	Black, Blue, Gray, Green, Red, White, Yellow	Rubber	Vinyl	6.5 (0.16)	15.4 (16.8)	12.6 (220)	134	200 (93)	—	General purpose tape for color coding and marking. Embossed vinyl backing.
2929	Silver	Rubber	Polyethylene Over Cloth Scrim	5.5 (0.14)	45 (49)	19 (333)	14	200 (93)	—	Utility grade duct tape for temporary repairs, sealing, holding and marking.
1900	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	5.8 (0.15)	62 (68)	19 (333)	15	200 (93)	—	Economical choice for sealing, holding and marking.
Specialized High Strength Duct Tapes										
DT17	Black	Natural Rubber	Polyethylene Film Over Cloth Scrim	17.0 (0.43)	69 (75.5)	41 (718)	13	150 (65)	—	Provides easy tear and good conformability. Great for seaming applications, repairing bottom boards and protecting various surfaces.
390	Silver, Olive	Rubber	Polyethylene Over Cloth Scrim	11.7 (0.30)	114 (125)	48 (841)	12	200 (93)	—	Highest tensile for most demanding jobs, olive for military duct tape requirements.
393	Silver	Rubber	Polyethylene Over Cloth Scrim	12.0 (0.30)	95 (104)	36 (632)	8	200 (93)	—	High adhesion, easy tear, for moisture proofing and insulation sealing.
6910	Silver, Black	Rubber	Vinyl Coated Cloth	12.0 (0.30)	45 (49)	45 (788)	5	200 (93)	—	Excellent grip/gaffer's tape. Matte finish tape for low light reflectance.
GT1/GT2/GT3	White, Grey, Black, Brown, Blue, Burgundy, Green, Purple, Tan, Red, Teal, Yellow, Electric Blue, Olive Drab, FL Blue, FL Green, FL Orange, FL Yellow, FL Pink	Synthetic Rubber	Cotton Cloth	11.0 (0.27)	72 (78.8)	56 (980)	6	200 (93)	—	High strength and conformable to irregular surfaces. Good for taping down cords and wires, bundling, holding, splicing and marking.

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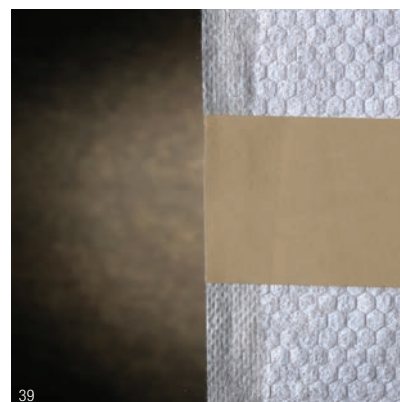
Scotch® Flatback Tapes

With a core capability of coating technology, 3M offers a range of backings and adhesive strengths to hold up to your job.

- High strength backings with strong cross direction tensile properties used for tabbing and splicing
- Highly visible backing to help you identify and remove splices



Scotch® Flatback Tape 2525 is great for applications requiring a unique color.



Scotch® Flatback Tape 2517 is great for low or high temperature splicing.

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Can be Certified to Specification	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759				
250	Tan	Rubber	Flatback Paper	6.0 (0.15)	87 (95)	59 (1033)	4	125 (52)	30	ASTM D 6123; D 6123M-97	Used in paint adhesion testing.
256	White, Red, Green	Rubber	Flatback Paper	6.7 (0.17)	25 (27)	20 (350)	5	200 (93)	60	ASTM D 6123; D 6123M-97	Printable, accepts marking inks.
2515*	Tan	Rubber	Kraft Paper	6.9 (0.18)	58 (63)	40 (700)	9	200 (93)	30	—	General purpose splicing, holding and bundling applications.
2517	Medium Brown	Rubber	Kraft Paper	6.5 (0.15)	78 (85)	35 (543)	2	300 (149)	30	ASTM D 6123; D 6123M-97	Excellent splicing, holding and bundling applications.
2519**	Brown	Rubber	Unblended Kraft Paper	7.1 (0.18)	47 (51)	47 (823)	8	200 (93)		ASTM D 6123; D 6123M-97	Excellent for splicing liner boards, bundling, holding, reinforcing, wrapping and protecting.
2525	Orange	Rubber	Flatback Paper	9.5 (0.24)	69 (75)	49 (858)	2	300 (149)	60	—	Premium splicing, bright color.
2526	White	Rubber	Flatback Paper	9.8 (0.24)	69 (75)	50 (858)	4	300 (149)	60	—	Excellent adhesion and strength for textile applications.

*3M brand.

**2519 Maximum Operating Temperature determined for holding a paper splice at 200°F (93°C) under a force of 2 pounds/linear inch (PLI).

3M™ Masking Films

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Comments
Based on ASTM Test Method:				D-3652	D-3759	D-3759			
7260M	Translucent	n/a	Polypropylene	1.8 (0.04)	5 (88)	700	315 (157)	60	Designed for masking cars and light trucks during OEM painting and for industrial paint masking applications such as truck, bus, RV heavy equipment and aircraft. Large area bags and sheets.
7300	Translucent	n/a	Polypropylene	3.4 (0.09)	7.4 (130)	680	310 (155)	60	High performance, high temperature masking film that is soft flexing for good drape and conformability. Single wound slit rolls in a variety of widths.

Surface Protection

Protection where you need it.

Innovative 3M tapes and films can protect surfaces by resisting abrasion, UV, heat and punctures. Our surface protection products adhere and conform to numerous surfaces for maximum protection, and then remove easily. When your products need protection, you can trust 3M for practical solutions.

3M™ Clean-View Pads

Reliable Protection Against Paint Overspray

This clear multi-sheeted adhesive system protects paint booth windows and light fixtures from overspray. You reduce the labor expense, downtime, and amount of chemicals used for cleanup.

- Clear polyethylene keeps paint out and lets light through to help brighten the work area
- Individually tabbed sheets for easy removal from the pad
- Eliminates re-application of single layer protection films
- Acrylic adhesive system for adhesion to glass surfaces



Reliable protection is easy with 3M™ Clean-View Pads. Simply remove the clear protective liner to expose adhesive. Adhere the top adhesive edge to a dry, clean surface and squeegee over the bond area. When the sheet becomes contaminated, peel away to reveal a fresh, ready-to-use sheet.



For large and small painting operations, 3M™ Clean-View Pads protect windows and light fixtures from overspray.



3M™ Clean-View Pads help reduce the cost, downtime, and chemicals used in conventional cleanup.

Product Number	Quantity	Sizes Inches (mm)	Pad/Adhesive	Color	Total Layer Thickness mils (mm)	Backing Layer Thickness mils (mm)	Adhesive Layer Thickness mils (mm)	Adhesion to Steel oz./in. (N/100 mm)	Comments
5850	20 sheets/pad 6 pads/case	13 x 51 (330 x 1295)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	Ideal for paint booth operation. Protects from paint overspray.
	20 sheets/pad 6 pads/case	18 x 46 (457 x 1168)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	
	20 sheets/pad 6 pads/case	24 x 50 (609 x 1270)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	
	20 sheets/pad 6 pads/case	24 x 36 (609 x 914)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	

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3M™ Scotchgard™ Multi-Layer Protective Film

Easy, Cost-Effective Graffiti Removal

Transit authorities can spend millions annually to maintain and repair interior windows and glass. Specialized labor for replacing glass and material costs add up quickly.

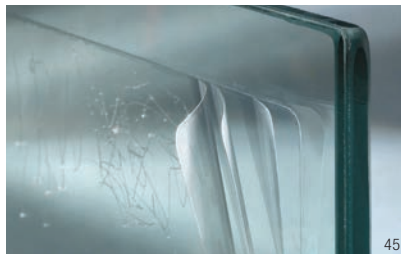
On interior windows you can simply peel away graffiti with 3M™ Scotchgard™ Film.

Choices with **multi-layer protection** save you time and money while maintaining windows that are free from scratches, graffiti and acid-etched marks. When one layer is defaced, simply peel it away to refresh the window quickly and easily.

- Peels in minutes to return surfaces to service quickly
- Clean removal of each layer with no adhesive residue
- Protection from acid, scratches, permanent marker and hard water stains
- Minimal training to install
- Optically transparent view for glass-like clarity



Easy-to-apply 3M™ Scotchgard™ Multi-Layer Protective Film adheres to any flat glass that is free of dirt, debris and oils. Four layers are as clear as glass to see through.



45



46



47

With 3M™ Scotchgard™ Multi-Layer Protective Film on the inside of public transportation windows, vandals deface one layer of four protective layers not the glass. The defaced layer is simply and cleanly removed to reveal a new layer of protection. 3M optimized adhesives provide long-term adhesion and clean, easy removal between each layer and the last layer from the glass.

Simply pick and lift the corner, then peel off the defaced sheet.

	3M™ Scotchgard™ Multi-Layer Protective Film 1004 For clean removal on surfaces such as glass, mirrors, polished stainless steel and other smooth surfaces.	3M™ Scotchgard™ Multi-Layer Protective Film 1004MS Series More aggressive adhesive system for polycarbonates, acrylics, brushed stainless steel and other slightly porous surfaces.	
Product #	1004	1004MS	1001MS
Layers/Sheet	4	4	1
Quantity	20 sheets/case	20 sheets/case and 200 sheets/case	1 roll/case
Size	60" x 72" or 60" x 60" (Custom cut sizes available based on volume)	60" x 72" or 60" x 60" (Custom cut sizes available based on volume)	58.5" x 100 ft. roll

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3M™ Sandblast Stencil Products and Impact Stripping Tapes

Thick, Durable Rubber Backing for Demanding Surface Protection

Combining 34–82 mil thick rubber backing with aggressive pressure sensitive adhesive, these products meet the rigors of two tough masking applications:

3M™ Sandblast Stencil Products

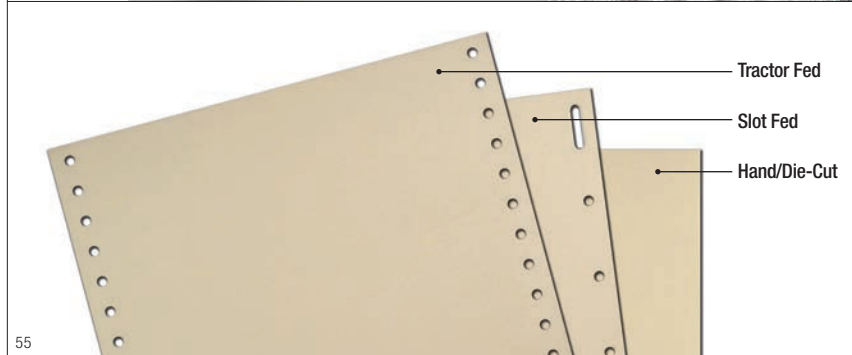
- Rubber backing thickness ranging from 32–40 mils withstand the heavy blasting used to create crisper, deeper images in stone, wood, and other surfaces
- Uniform backing thickness helps ensure efficient plotter cutting
- Clean, visible cut marks reduce picking and weeding time
- Adhesive adheres to numerous surfaces and removes cleanly
- Advanced rubber backing formulation prevents stretching and design distortion

3M™ Impact Stripping Tapes

- Choice of rubber backing for surface protection during media stripping processes



52



55

For cost-effective production and consistent professional results, 3M Sandblast Stencil products are available with single or double liners for friction, slot and tractor fed plotters as well as hand and die-cutting. Single liners maintain design integrity with either computer or stencil press equipment. Double liners provide support for “islands” eliminating the need for application tape.



56
Uniform stencil thickness and quality hole punch allow smooth and productive design cutting.



57
For clean, intricate designs, cut marks are clean and visible for easy and precise picking and weeding.



40
Easy to see yellow liner, enhances the monument process by providing more precise picking power for greater productivity, blasting accuracy and liner residue cleanup. The advantage of yellow versus a clear liner is especially important when working with intricate details.



58
3M™ Performance Plus Duct Tape 8979 is ideal for field blasting to help protect surrounding granite surface from blasting impact and rebound damage. Aggressive adhesive stays in place yet removes cleanly without residue.



59
Abrasion-resistant rubber backing and acrylic adhesive of 3M™ Impact Stripping Tapes protect surfaces during plastic media blasting.

3M™ Sandblast Stencil Products and Impact Stripping Tapes

Product Number	Color	Total Thickness (mils)	Adhesive Type	Release Liner Thickness	Release Liner Type	Secondary Liner Thickness	Secondary Liner Type	Product Formats				Adhesion Level	Comments
								Gerber Compatible (Slot Fed)	IBM Compatible (Tractor Fed)	Friction Fed and/or Flatbed	Hand-Cut and/or Die-Cut		
Double Liner													
519Y	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester		■	■	Medium	Yellow, translucent polyester inner liner, white polypropylene outer liner. Yellow, translucent polyester inner liner. Extra thick, translucent polyester outer liner. Highest adhesion level for double lined products. Wide format available. Translucent, polyester inner liner. Extra thick, translucent polyester outer liner. Wide format available.	
519YS	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester	■			Medium		
519YT	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester		■		Medium		
519YP2	Tan	45	Rubber	2.0	Polyester	1.5	Polyester		■	■	High		
519YP2S	Tan	45	Rubber	2.0	Polyester	1.5	Polyester	■			High		
519YP2T	Tan	45	Rubber	2.0	Polyester	1.5	Polyester		■		High		
519YP	Tan	45	Rubber	4.0	Polyester	1.5	Polyester			■	Medium		
519YPS	Tan	45	Rubber	4.0	Polyester	1.5	Polyester	■			Medium		
519YPT	Tan	45	Rubber	4.0	Polyester	1.5	Polyester		■		Medium		
Single Liner													
507	Green	43	Rubber	2.0	Polyethylene	—	—			■	■	Low	Green, high release liner. Butter cut. Ideal for letter press operations.
510	Green	43	Rubber	2.0	Polyester	—	—			■	■	Low/Med	Translucent, easy liner release. Use on wood and painted surfaces.
520	Tan	43	Rubber	2.0	Polyester	—	—			■	■	Med/High	Translucent, high liner release. Best blast resistance for single liner products.
520S	Tan	43	Rubber	2.0	Polyester	—	—	■				Med/High	
520T	Tan	43	Rubber	2.0	Polyester	—	—		■			Med/High	
520ETL	Tan	43	Rubber	4.0	Polyester	—	—			■	■	Med/High	
1532	Green	34	Rubber	4.0	Polyester	—	—			■	■	Medium	Extra thick, translucent, high liner release. Highest adhesion for single liner products. Excellent for intricate designs. Conformable for use on irregular surfaces.
1532S	Green	34	Rubber	4.0	Polyester	—	—	■				Medium	
1532T	Green	34	Rubber	4.0	Polyester	—	—		■			Medium	

Product Number	Backing Material	Color	Adhesive Type	Total Thickness mils (mm)	Adhesion to Steel oz./in. (N/100 mm)	Elongation at Break %	Liner Type	Comments
ASTM Test Method				D-3652	D-3330	D-3759		
Impact Stripping Tapes								
500	Rubber	Green	Acrylic	36 (0.9)	29 (31)	85	Paper	Good for small lettering. Acrylic adhesive ideal for use during plastic media blasting.
528	Rubber	Tan	Acrylic	82 (2.1)	29 (31)	145	Paper	Thickest backed sandblast stencil product.

Product Number	Coating Base	Color	Consistency	Available Sizes	Comments
Fillers					
2	Rubber	Light Beige	Syrupy	Quart, Gallon	Designed for smooth and polished surfaces. More aggressive than filler #3.
3	Rubber	Light Beige	5 times more viscous than filler #2	Gallon	Typically used on axed or frosted surfaces.

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High Strength Tapes

High strength. Super performance.

Bundling, reinforcing and securing solutions with reliable holding power.

When you need a tape as strong as your reputation, you can count on 3M's consistently reliable, market-leading high strength tapes that are engineered to meet virtually any strapping, bundling or reinforcing challenge.

Scotch® and Tartan™ High Strength Tapes

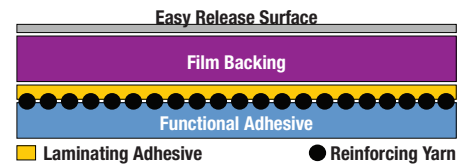
For Packaging and Non-Packaging Applications

Selection: Our range of high strength tape constructions can help balance your product performance and budget needs.

Save time and money: Let 3M's application and technical experts, backed by a robust lab testing capability, help match the right tape to your performance requirements.

Peace of mind: Scotch® and Tartan™ brands are among the most innovative and trusted in the world. Our world-class tape manufacturing facilities churn out consistent and reliable products, roll after roll.

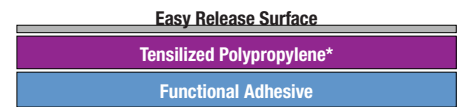
Filament Reinforced Tape



Reinforced Strapping Tape



Tensitized Polypropylene Tape



*A pre-stretched film to orient the backing for strength

Streamlined Selection for Application Success

HOLDING
Up to **120** lbs./in.



Pallet Unitizing

BUNDLING
Up to **270** lbs./in.



Carpet Bundling


CLOSING
Up to **600** lbs./in.




L- and U-Clip Closures



Bundling for Shipping and Handling



PVC Pipe Bundling



Stabilizing Loose Parts



Bulk Bin or Skid Box Banding



Rebar Bundling



Metal Coil Tabbing

Product	Description	Tensile Strength*
8934	Glass yarn reinforced	100 lbs./in.
860	Tensitized polypropylene	110 lbs./in.
862	Reinforced strapping tape for strength AND high tape clarity	120 lbs./in.

Product	Description	Tensile Strength*
897	Glass yarn reinforced	170 lbs./in.
893	Glass yarn reinforced	300 lbs./in.
880	Polyester yarn reinforced	270 lbs./in.

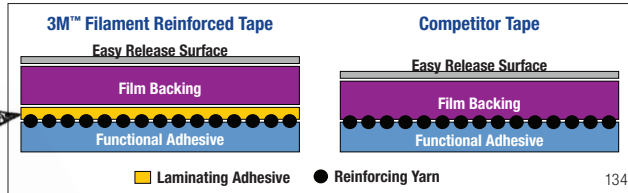
Product	Description	Tensile Strength*
898	Glass yarn reinforced, first choice for L- or U-Clip closure of non-RSC boxes	380 lbs./in.
890MSR	Glass yarn reinforced, modified synthetic rubber adhesive for oily surfaces	600 lbs./in.
8899HP	Tensitized polypropylene, clean removal	170 lbs./in.

*ASTM Test Method D-3759

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Scotch® and Tartan™ High Strength Filament Tapes

The World's Go-To Source for Filament Tapes Since 1946



3M's laminating adhesive layer provides an extra measure of protection against tape delamination to help ensure tape strength and performance throughout the application. With 3M, you get more consistency, reliability and confidence.

Technologies Matched to the Applications

Choice of Adhesives

- **SR (Synthetic Rubber):** Versatile, good adhesion to many surfaces
- **MSR (Modified Synthetic Rubber):** Designed for adhesion to oily surfaces
- **RCT:** Designed for adhesion to recycled corrugate and other hard-to-stick-to-surfaces

Choice of Backings

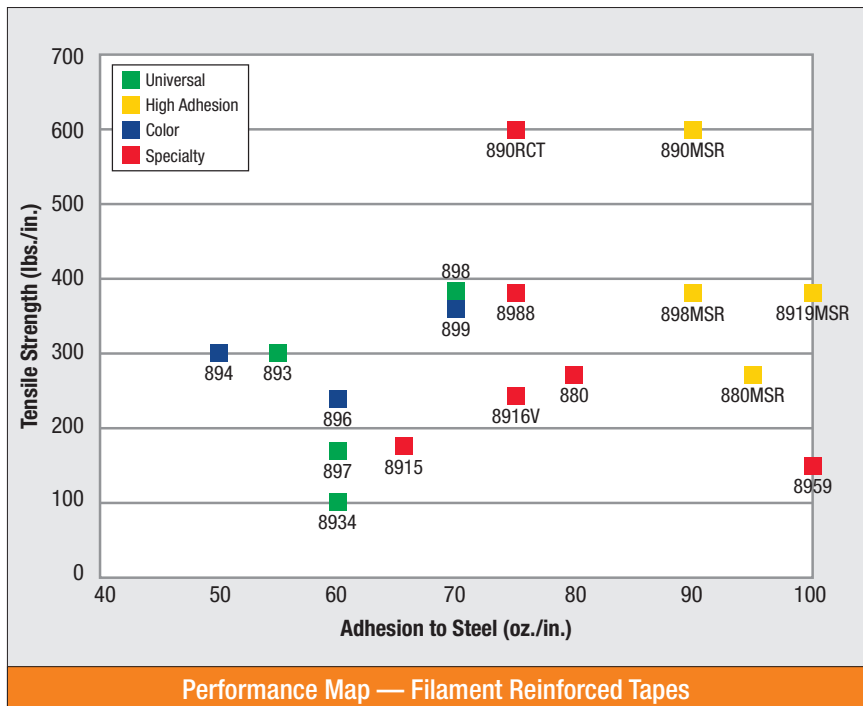
- **Polypropylene:** Good abrasion, moisture and scuff resistance; excellent conformability
- **Polyester:** Tough, strong backing; handles and dispenses easily

Choice of Filament Types

- **Fiberglass:** Higher tensile strength for security and stretch resistance for stability
- **Polyester:** Higher elongation for better shock absorption and impact resistant



- ### Bi-Directional Filament
- Superior cut and puncture resistance
 - Extra box or package security against pilferage
 - Highest adhesion in our high strength tape offering



Scotch® and Tartan™ High Strength Filament Tapes

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Backing Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
Universal Filament									
898	380 (6655)	Polypropylene	Fiberglass	6.6 (0.168)	Synthetic Rubber (SR)	70 (77)	5	Clear	L-Clip box closure, General bundling and reinforcing; Very high strength, Versatile, Good adhesion to many substrates
893	300 (5254)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	55 (60)	4.5	Clear	Box closing, palletizing, strapping, bundling and reinforcing; High strength
897	170 (2977)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	60 (65)	3	Clear	Box closing, palletizing, strapping, bundling and reinforcing; Medium strength
8934*	100 (1751)	Polypropylene	Fiberglass	4.0 (0.102)	Synthetic Rubber (SR)	60 (65)	3	Clear	Box closing, palletizing, strapping, bundling and reinforcing; Utility
Colored Filament									
899	360 (6305)	Polypropylene	Fiberglass	6.6 (0.168)	Synthetic Rubber (SR)	70 (77)	5	Red	General bundling and reinforcing; Red color for increased visible and detection
894	300 (5254)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	50 (55)	4.5	Black	Pipe bundling and other outdoor applications; High UV resistance
896	240 (4203)	Polypropylene	Fiberglass	5.4 (0.137)	Synthetic Rubber (SR)	60 (66)	3	White	Heavy box closure, general bundling and reinforcing; White boxes, Color coding
High Adhesion Filament									
890MSR	600 (10500)	Polyester	Fiberglass	8.0 (0.203)	Modified Synthetic Rubber (MSR)	80 (88)	3	Clear/ Black	Metal coil closure; Good adhesion to oily surfaces
898MSR	380 (6655)	Polyester	Fiberglass	6.0 (0.152)	Modified Synthetic Rubber (MSR)	90 (99)	3	Clear	Metal coil closure; Good adhesion to oily surfaces
8919MSR	380 (6655)	Polyester	Fiberglass	7.0 (0.180)	Modified Synthetic Rubber (MSR)	100 (109)	3	Clear	Metal coil closure; Good adhesion to oily surfaces, Thicker backing for improved handling
880MSR	270 (4728)	Polyester	Polyester	7.7 (0.196)	Modified Synthetic Rubber (MSR)	95 (100)	19	Clear	Metal coil closure; Good adhesion to oily surfaces, High cut resistance
Specialty Filament									
890RCT	600 (10500)	Polyester	Fiberglass	8.0 (0.203)	Synthetic Rubber (RCT)	75 (82)	3	Clear	Basiloid, Heavy appliance lifting; Good adhesion to recycled corrugate
8988	380 (6655)	Polypropylene	Fiberglass	6.9 (0.175)	Synthetic Rubber (RCT)	75 (82)	3	Clear	L-Clip box closure; Good adhesion to recycled corrugate
880	270 (4728)	Polypropylene	Polyester	7.7 (0.196)	Synthetic Rubber (SR)	80 (88)	19	Clear/ Red	Pipe and conduit, bundling and color coding; Excellent shock resistance
8916V	210 (3678)	Polypropylene	Fiberglass	6.8 (0.172)	Synthetic Rubber (SR)	75 (82)	3	Clear/ Blue	Appliance, Secure and stabilize parts; Clean removal, Thicker backing
8915	170 (2977)	Polypropylene	Fiberglass	6.0 (0.150)	Synthetic Rubber (SR)	65 (71)	3	Clear	Appliance, Secure and stabilize parts; Clean removal
8959	150 (2627)	Polypropylene	Bi-Directional Fiberglass	5.7 (0.145)	Synthetic Rubber (SR)	100 (109)	6	Clear	Heavy box closure, Splicing, Metal parts bundling; Bi-directional filament for excellent cut and puncture resistance; High adhesion

*Tartan™ branded.

Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.

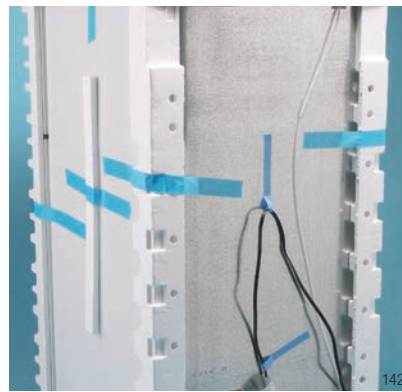
Scotch® and Tartan™ Tensilized Polypropylene Tapes

Clean Removal

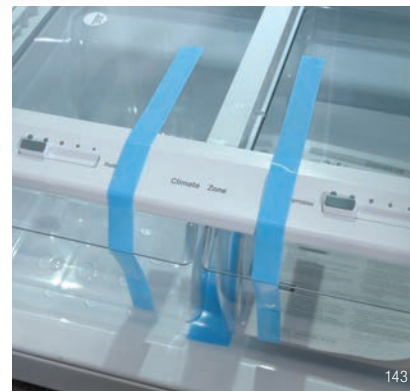
- MOPP (monoaxially-oriented polypropylene) tape construction
- High strength tapes that hold firm, remove cleanly with no adhesive residue
- Great adhesion to vinyl and other plastics, glass, painted and unpainted metals, or powder coated
- Holds shelving, racks, doors, panels, cords, other parts in place, from plant to install



Bundle plastic, metal, stainless steel, glass, powdercoat or other coated electronic, appliance or automotive parts during assembly and transportation.



Hold packaging materials, spacers, corner boards, power cords and other hard-to-manage parts firmly in place.



Appliance racks, shelves, drawers and doors can be secured, from plant to install, then removed cleanly with no adhesive residue.

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
8899HP	170 (2977)	Polypropylene	None	4.8 (0.12)	Synthetic Rubber	55 (60)	30	Blue/Ivory/White	Secure and stabilize parts, clean removal and high/low temperature performance
8898	160 (2802)	Polypropylene	None	4.6 (0.12)	Synthetic Rubber	75 (82)	32	Blue/Ivory	Appliance, Secure and stabilize parts; Clean removal, High adhesion
860*	110 (1926)	Polypropylene	None	2.8 (.071)	Synthetic Rubber	45 (49)	33	Black	General bundling and strapping; Utility grade for pallet unitizing

*Tartan™ branded.

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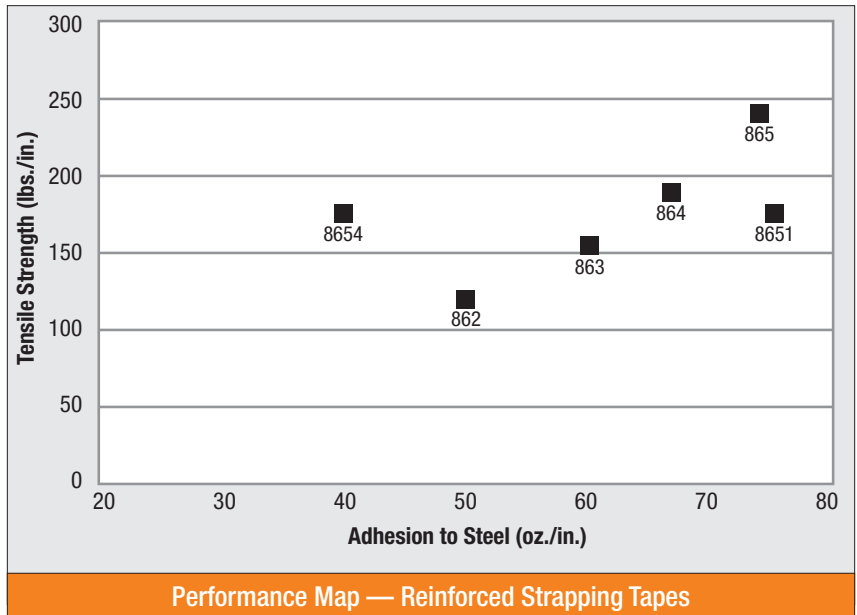
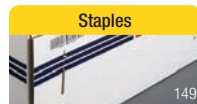
Scotch® Reinforced Strapping Tapes

The CLEAREST High-Strength Tape Available



Why 3M?

- **Strong:** Polypropylene backing extruded to create monofilament “ribs”
- **Secure:** Resists nicking, cutting, tearing or puncturing during handling
- **Clear:** No filaments to obstruct graphics



Product	Clarity to Showcase Marketing Content	Barcode Scan-able	Resists Nicks	Resists Abrasion	Does it Scratch?
Reinforced Strapping Tape	Yes	Yes	Yes	Yes	No
Reinforced Gummed Paper Tape	No	No	Yes	Somewhat	No
Staples	Somewhat	No	n/a	n/a	Yes
Filament Tape	Somewhat	No	Yes	Yes	No
Tensilized Polypropylene Tape	No	No	No	Yes	No

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
865	240 (4200)	Polypropylene	Polypropylene	6.4 (0.163)	Synthetic Rubber	74 (80)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
864	190 (3325)	Polypropylene	Polypropylene	5.6 (0.142)	Synthetic Rubber	67 (73)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
8651	175 (3064)	Polypropylene	Polypropylene	5.6 (0.142)	Synthetic Rubber	75 (82)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
863	155 (2713)	Polypropylene	Polypropylene	5.0 (0.127)	Synthetic Rubber	60 (65)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
862	120 (2100)	Polypropylene	Polypropylene	4.6 (0.117)	Synthetic Rubber	50 (54)	30	Clear/Black	Pipe Bundling; Black for UV resistance

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