



Science.
Applied to Life.™

3M Packaging Solutions Guide

Right tapes.
Right system.
Right partner.

3M Closure and Masking Systems Division
April 2019

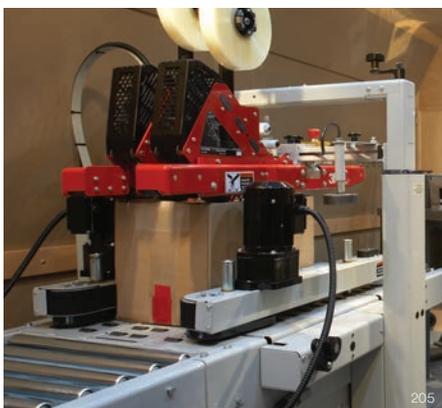
At 3M, we never forget our success was sealed by a roll of tape.

A single inventive way of solving a customer's problem more than 86 years ago led to a breakthrough that became known as "Scotch® Tape"; an invention that changed the world. Today, the curious minds at 3M continue to maintain the legacy of the original Scotch® Tape by meeting customer needs everyday and never compromising on performance.

Reliable performance proven over time has formed a bond of trust with Scotch® Tape. This is why it remains the number one brand for packaging, bundling, reinforcing solutions and more. At 3M, we stake our reputation on delivering the very best, most reliable tapes every day so you can trust Scotch® Tape to protect your reputation, as well.

You can double down on dependability by combining Scotch® Box Sealing Tapes with 3M-Matic™ Case Sealers. With nearly a half-century of experience in building case sealing equipment, 3M delivers the "total package" in packaging systems.

In a world where so many unexpected events can impact your results, Scotch® Tapes and 3M packaging solutions have got you covered — with dependable, high quality products and systems to meet your ever-changing requirements.



Right tapes. Right system. Right partner.

3M Packaging Solutions



Packaging Equipment and Dispensers

| | |
|--|-------|
| 3M-Matic™ Case Sealers Selection Overview | 6-7 |
| 3M-Matic™ Adjustable Case Sealers | 8-9 |
| 3M-Matic™ Random Case Sealers | 10 |
| 3M™ AccuGlide™ Taping Head Technology | 11 |
| Customized 3M-Matic™ Equipment | 11 |
| Non-RSC Closure Solutions..... | 12 |
| 3M-Matic™ Case Sealers Replacement Parts and Accessories | 13 |
| Scotch® and Tartan™ Manual Tape Dispensers..... | 14-16 |
| 3M Systems Tape Agreement | 17 |



Box Sealing Tapes

| | |
|---|-------|
| Scotch® and Tartan™ Box Sealing Tapes..... | 21 |
| Scotch® Recycled Corrugate Tapes..... | 22 |
| Scotch® Custom Printed Box Sealing Tapes..... | 23 |
| Scotch® Cold Temperature Tape..... | 24 |
| Scotch® Security Tapes | 24-25 |
| Scotch® Specialty Box Sealing Tapes | 25 |
| Light Duty Packaging Tapes | 26-27 |



High Strength Tapes

| | |
|---|-------|
| High Strength Tapes | 29 |
| High Strength Filament Tapes..... | 30-31 |
| Tensitized Polypropylene Tapes | 32 |
| Scotch® Reinforced Strapping Tapes..... | 33 |
| Scotch® Stretchable Tapes | 34 |



Custom Packing Solutions

| | |
|----------------------------------|-------|
| 3M™ Carry Handles..... | 36-37 |
| Scotch® Multipack Tapes..... | 38 |
| Bag Sealing Tapes | 39 |
| 3M™ Tape Pads | 39 |
| Scotch® Bag Conveying Tape | 40 |
| 3M™ Hang Tabs..... | 40 |
| Scotch® Pouch Tapes..... | 41 |
| Label Protection Tapes | 41 |
| 3M™ Packing List Envelopes | 42 |
| Remote Sensing Tapes | 43 |
| Scotch® Tear Strip Tapes | 44 |

| | |
|-----------------------|-------|
| Glossary | 45-46 |
|-----------------------|-------|

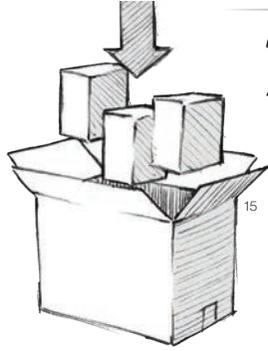
| | |
|------------------------------|----|
| Numerical Index | 47 |
|------------------------------|----|

| | |
|---------------------------------|-------|
| Product Name Index | 48-49 |
|---------------------------------|-------|

Combi
Packaging Systems LLC

3M-Matic
Case Sealing Systems

ERECTING & PACKING



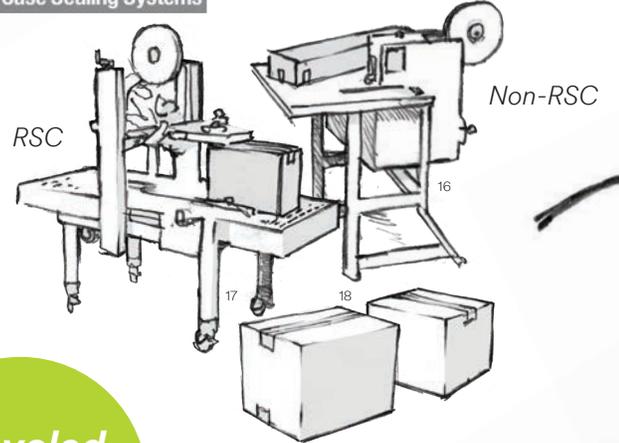
Case erectors
Ergo packs

Throughput & speed

3M™ AccuGlide™ Tape
Head Technology

3M-Matic
Case Sealing Systems

Consistency
Security
Protection



SEALING

Semi-automatic
Hand applied
Bag sealing

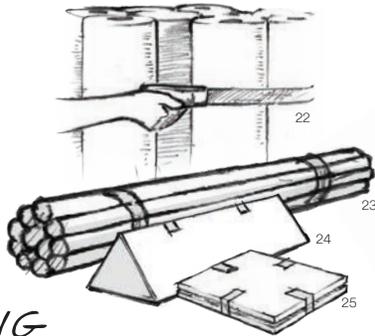


Scotch

Recycled
corrugate?
No problem!

Scotch

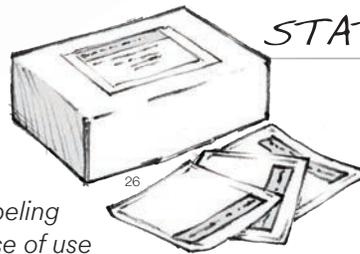
Protection
Control
Security



BUNDLING

L-CLIP CLOSURE

PACKING STATIONS



Labeling
Ease of use

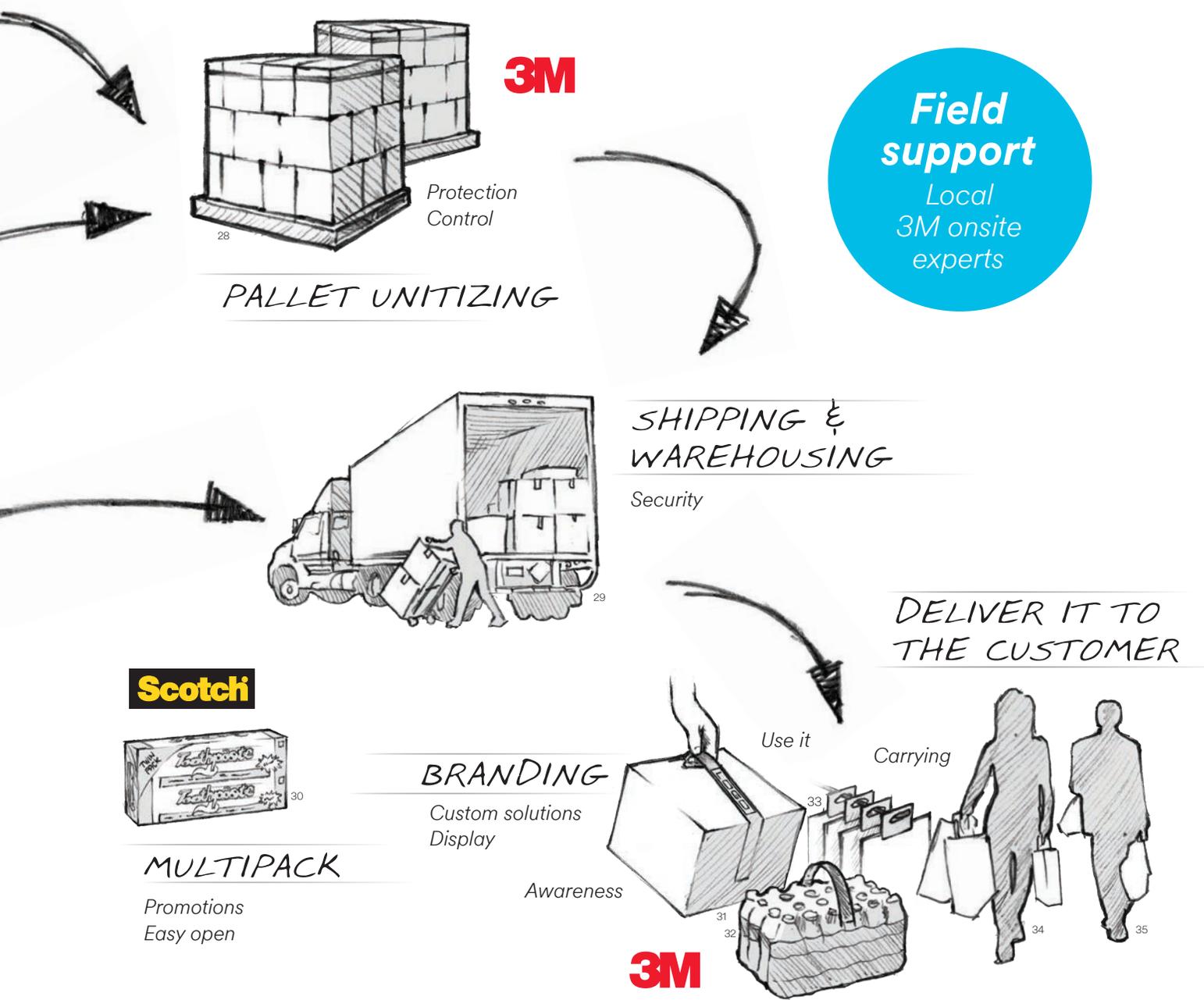
Document attachment
Label protection
Patching

Tech support
Before & after
the sale

Scotch **3M**

The Total Package

Pack it. Close it. Move it. Sell it. Use it.



Field support
Local 3M onsite experts



Packaging Equipment & Dispensers

How do you get your packages securely sealed, out the door and into the hands of your customers in the fastest, most efficient manner? It starts with 3M-Matic™ Case Sealers. For 50 years, packaging facilities everywhere have relied on these productivity-enhancing solutions for consistent, efficient case sealing, day after day.



3M-Matic™
Case Sealers
ANNIVERSARY CELEBRATION
Consistent. Reliable. Tough.
3M

3M-Matic™
Case Sealing Systems

3M-Matic™ Case Sealer

Things to Consider When Selecting a Case Sealer

1

**Do you pre-form your boxes?
What style box do you use?**

- RSC (Regular Slotted Carton)
- FPF (Five Panel Fold)
- Full overlap

3

What closure method do you use?

- RGT (Reinforced Gum Tape)
- Pressure-sensitive box sealing tape
- Glue
- Staples

2

**How many boxes do you
seal per day?**

4

**Do you seal your boxes
in uniform or random
production runs?**

3M-Matic™ Case Sealers Selection Overview



38

For Sealing Uniform Size Boxes

Manually Adjustable, Semi-Automatic Affordable for Low Volume



a20

Up to 30 cs/min
Up to 65 lbs
Bottom belt drive

40



a80*

Up to 30 cs/min
Up to 65 lbs
Side belt drives

41

Manually Adjustable, Semi-Automatic



8000af

Up to 40 cs/min
Up to 85 lbs
Side belt drives

210

*Available with 3 inch taping head.

Manually Adjustable, Semi-Automatic Affordable for Low Volume



200a*

Up to 40 cs/min
Up to 85 lbs
Bottom belt drive

211



800ab

Narrow cases
Bottom only taping
Up to 40 cs/min
Up to 85 lbs
Side belt drives

44



800asb

Small cases
Up to 28 cs/min
Up to 85 lbs
Side belt drives

194



7000a Pro

Up to 40 cs/min
Up to 85 lbs
Top/bottom belt drives

195



8000a

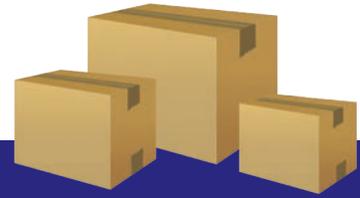
Up to 40 cs/min
Up to 85 lbs
Side belt drives

191

*Available with 3 inch taping head.



3M-Matic™ Case Sealers Selection Overview



39

For Sealing Various Size Boxes

Self-Adjusting, Semi-Automatic

| | | | |
|---|---|--|--|
|  <p>800r* 49 Up to 20 cs/min Up to 85 lbs Side belt drives</p> |  <p>800rks* 50 Up to 10 cs/min Up to 200 lbs Top/bottom side belt drives</p> |  <p>7000r Pro* 192 Up to 24 cs/min Up to 85 lbs Top/bottom belt drives</p> |  <p>7000r HS Pro* 209 Up to 28 cs/min Up to 60 lbs Top/bottom belt drives</p> |
|---|---|--|--|

*Available with 3 inch taping head.

†Comes standard with 3 inch taping head.

Non-RSC Box

| | |
|---|--|
|  <p>S867 52 3M-Matic™ L-Clip Applicator S867 is a semi-automatic unit that applies 4.5 inch L-Clips of Scotch® Filament Tapes and Scotch® Box Sealing Tapes at up to 50 clips/min.</p> |  <p>S867 II 64 3M-Matic™ Dual L-Clip Applicator S867 II applies two 4.5 inch L-Clips of Scotch® Filament or Reinforced Strapping Tape on the same edge at up to 50 clips/min.</p> |
|---|--|

Self-Adjusting, Fully-Automatic Flap Folding

| |
|--|
|  <p>800rf* 51 Up to 10 cs/min Up to 65 lbs Side belt drives</p> |
|--|

*Available with 3 inch taping head.

3M-Matic Helpline: 1-800-328-1390

When you have a question, simply call the toll-free helpline, open to take your calls Monday through Friday, 8:00am to 4:30pm Eastern Standard Time. Messages will be taken 24 hours a day for next working day response.

Belt Drive Key

2 = Bottom belt drives
7 = Top and bottom belt drives
8 = Side belt drives

Box Type

a = Adjustable, for batch runs
r = Random, for mixed runs

Additional Capability

b = Bottom only
f = Flap folding
ks = King size
sb = Small box

3M-Matic™ Adjustable Case Sealers



Gain productivity with quick height and width adjustments.

With quick manual adjustment, these rugged units reliably and accurately seal runs of the same size cartons for a variety of markets: food and beverage, medical devices, pharmaceutical, electronics, retail, manufacturing and distribution centers to name a few.



3M-Matic™ Adjustable Case Sealer a20 is an adjustable bottom belt drive case sealer to dependably seal uniform cases at up to 30 per minute.



3M-Matic™ Case Sealer 200a is an adjustable bottom belt drive case sealer to dependably seal uniform cases at up to 40 per minute.



3M-Matic™ Adjustable Case Sealer 7000a Pro is an adjustable top and bottom belt drive to dependably seal uniform cases at up to 40 per minute.



3M-Matic™ Adjustable Case Sealer 700a-s has advanced features to seal uniform cases at up to 30 per minute. Dual masts with dual lead screws for stability and uniform height adjustments. Adjustable top and bottom belt drive system for reliable conveyance of heavier or tall/light boxes. Compression rollers position each box for precise tape sealing. Stainless construction for corrosive environments.

Bottom Belt Drive Systems

| Machine | Drive System | Box Size Capacity (inches) | | | | | | Power Requirements | | Operating Rate (cs/min) | Belt-Drive Speed (ft/min (m/s)) | Taping Head | Comments |
|---------|--------------|----------------------------|--------|-------|---------|------|------|--------------------------|--------|-------------------------|---------------------------------|--|---------------------------|
| | | Minimum | | | Maximum | | | Electrical | Air | | | | |
| | | L | W | H | L | W | H | | | | | | |
| a20 | Bottom | 6.0 | 6.5 | 4.25 | N/L | 21.5 | 21.5 | 115VAC 60Hz 2.8A 360W | No Air | Up to 30 | 78 (0,4) | 2" 3M™ AccuGlide™ 2+ | Entry Level |
| a20-s | | | | [3.5] | | | | | | | | | Stainless Steel |
| 200a | Bottom | 6.0 | 6.5 | 4.5 | N/L | 21.5 | 24.5 | 115VAC 60Hz 1.9A 220W | No Air | Up to 40 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 3" 3M™ AccuGlide™ 3 | Semi-Automatic Adjustable |
| 200a3 | | | [3.75] | | | | | | | | | | |

Standard size capabilities are listed above. If additional sizes can be met, they are indicated by [Taping Head] or [Machine Configuration]. Changing the taping head or machine configuration will allow for enhanced box height range indicated in the chart above. Please refer to the Instructions and Parts List or 3M representative for more detail.

Top and Bottom Belt Drive Systems

| Machine | Drive System | Box Size Capacity (inches) | | | | | | Power Requirements | | Operating Rate (cs/min) | Belt-Drive Speed (ft/min (m/s)) | Taping Head | Comments |
|------------|----------------|----------------------------|-----|------|---------|------|------|--------------------------|--------|-------------------------|---------------------------------|--|--|
| | | Minimum | | | Maximum | | | Electrical | Air | | | | |
| | | L | W | H | L | W | H | | | | | | |
| 700a-s | Top and Bottom | 6.0 | 6.0 | 4.75 | N/L | 21.5 | 24.5 | 115VAC 60Hz 3.8A 440W | No Air | Up to 30 | 78 (0,4) | 2" 3M™ AccuGlide™ 2+ Stainless Steel | For Corrosive Environment |
| 7000a Pro | Top and Bottom | 6.0 | 6.5 | 4.75 | N/L | 26.5 | 28.0 | 115VAC 60Hz 3.8A 440W | No Air | Up to 40 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 3" 3M™ AccuGlide™ 3 | Extended size capabilities are possible, please contact 3M |
| 7000a3 Pro | | | | | | | | | | | | | |

Standard size capabilities are listed above. If additional sizes can be met, they are indicated by [Taping Head] or [Machine Configuration]. Changing the taping head or machine configuration will allow for enhanced box height range indicated in the chart above. Please refer to the Instructions and Parts List or 3M representative for more detail.



3M-Matic™ Adjustable Case Sealers



38



a80

41

3M-Matic™ Adjustable Case Sealer a80 is an adjustable side belt drive case sealer that dependably seals uniform size cases.



8000a

191

3M-Matic™ Side Belt Adjustable Case Sealer 8000a is an adjustable side belt drive case sealer. Seals up to 40 cases per minute, using tape widths from 36mm to 48mm, and also 72mm tape.



800asb

194

3M-Matic™ Case Sealer 800asb is an adjustable side belt drive case sealer. Seals up to 28 cases per minute, using tape width of 36mm.



8000af

210

3M-Matic™ Case Sealer 8000af is an automatic flap folding machine that seals both the top and bottom of a box without an operator.



800ab

44

3M-Matic™ Case Sealer 800ab is an adjustable side belt drive case sealer. Applies bottom seal only at rates up to 40 cases per minute, using tape widths from 36mm to 48mm, and also 72mm tape.



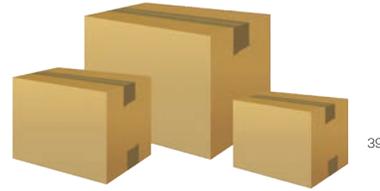
3M-Matic™ T-table Attachment is a 6" x 44" t-table attachment for use with 3M-Matic™ Case Sealers a80 and a80-3.

Side Belt Drive Systems

| Machine | Drive System | Box Size Capacity (inches) | | | | | | Power Requirements | | Operating Rate (cs/min) | Belt-Drive Speed ft/min (m/s) | Taping Head | Comments |
|---------|--------------|----------------------------|------|------|---------|------|-------|--------------------------|--------------------|-------------------------|-------------------------------|------------------------|--|
| | | Minimum | | | Maximum | | | Electrical | Air | | | | |
| | | L | W | H | L | W | H | | | | | | |
| a80 | Side | 6.0 | 4.75 | 4.5 | N/L | 21.5 | 21.5 | 115VAC 60Hz 3.8A 440W | No Air | Up to 30 | 78 (0,4) | 2" 3M™ AccuGlide™ 2+ | Entry Level |
| a80-3 | | | 5.75 | | | | | | | | | 3" 3M™ AccuGlide™ 2+ | |
| a80b | Side | 6.0 | 4.75 | 3.5 | N/L | 21.5 | N/L | 115VAC 60Hz 3.8A 440W | No Air | Up to 30 | 78 (0,4) | 2" 3M™ AccuGlide™ 2+ | Entry Level Bottom Taping Only |
| a80b-3 | | | 5.75 | | | | | | | | | 3" 3M™ AccuGlide™ 2+ | |
| 8000a | Side | 6.0 | 4.5 | 4.75 | N/L | 21.5 | 28.5 | 115VAC 60Hz 3.8A 440W | No Air | Up to 40 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Extended size capabilities are possible, please contact 3M |
| 8000a3 | | | 5.5 | 4.75 | | | 28.5 | | | | | 3" 3M™ AccuGlide™ 3 | |
| 800asb | Side | 6.0 | 3.9 | 2.75 | N/L | 21.5 | 22.25 | 115VAC 60Hz 3.8A 440W | No Air | Up to 28 | 57 (0,3) | 1.5" 3M™ AccuGlide™ II | Small Box |
| 800ab | Side | 6.0 | 5.5 | | N/L | 21.5 | N/L | 115VAC 60Hz 3.8A 440W | No Air | Up to 40 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Bottom Taping Only |
| 800ab3 | | | | | | | | | | | | 3" 3M™ AccuGlide™ 3 | |
| 8000af | Side | 6.0 | 4.75 | 4.5 | 30 | 21.5 | 28.5 | 115VAC 60Hz 3.8A 440W | 2.5 SCFM @ 85 PSIG | Up to 40 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Flap-Folding |
| 8000af3 | | | 5.75 | | | | | | | | | 3" 3M™ AccuGlide™ 3 | |
| a80-t | Side | 6.0 | 4.75 | 4.5 | N/L | 21.5 | 21.5 | 115VAC 60Hz 3.8A 440W | No Air | Up to 30 | 78 (0,4) | 2" 3M™ AccuGlide™ 2+ | Entry Level Pack Station |

Standard size capabilities are listed above. If additional sizes can be met, they are indicated by [Taping Head] or [Machine Configuration]. Changing the taping head or machine configuration will allow for enhanced box height range indicated in the chart above. Please refer to the Instructions and Parts List or 3M representative for more detail.

3M-Matic™ Random Case Sealers



Gain productivity with automatic height and width adjustments.

Adjusting automatically, these rugged units reliably and accurately seal runs of random size cartons for a variety of markets: food and beverage, medical devices, pharmaceuticals, electronics, retail, manufacturing and distribution centers. The 3M™ AccuGlide™ 2+ and 3 Taping Heads securely apply tape with low impact to protect even lightweight cases.



7000r Pro
3M-Matic™ Random Case Sealer 7000r Pro is a semi-automatic random case sealer that automatically adjusts for case height and width and is capable of sealing 24 cases per minute, using tape widths from 36mm to 48mm wide.



7000r HS Pro
3M-Matic™ Random Case Sealer 7000r High Speed Pro is a random size case sealer designed to automatically adjust to a variety of box sizes. It can seal up to 28 different case sizes per minute.



800r
3M-Matic™ Case Sealer 800r is a semi-automatic random case sealer automatically adjusts for case height and width. Top and bottom seal at rates up to 20 cases per minute, using tape widths from 36mm to 48mm wide.



800rks
3M-Matic™ Case Sealer 800rks is a random king size case sealer that automatically adjusts for case height and width and is capable of sealing up to 10 cases per minute, using tape widths from 48mm to 72mm wide.



800rfs
3M-Matic™ Case Sealer 800rf Type 40800 is a fully automatic random size case sealer that automatically adjusts for various case sizes and folds the top minor and major flaps up to 10 cases per minute. Using tape widths from 36mm to 48mm tape widths.

Top and Bottom Belt Drive Systems

| Machine | Drive System | Box Size Capacity (inches) | | | | | | Power Requirements | | Operating Rate (cs/min) | Belt-Drive Speed ft/min (m/s) | Taping Head | Comments |
|----------------------|----------------|----------------------------|-----|------|---------|------|------|---------------------------|---------------------|-------------------------|-------------------------------|---------------------|--|
| | | Minimum | | | Maximum | | | Electrical | Air | | | | |
| | | L | W | H | L | W | H | | | | | | |
| 7000r Pro | Top and Bottom | 6.0 | 6.5 | 4.5 | N/L | 26.5 | 26.0 | 115VAC 60Hz 3.8A 440W | 3.75 SCFM @ 85 PSIG | Up to 24 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Extended size capabilities are possible, please contact 3M |
| 7000r3 Pro | | | | | | | | | | | | 3" 3M™ AccuGlide™ 3 | |
| 7000r HS Pro | Top and Bottom | 7.0 | 7.0 | 3.5 | N/L | 26.0 | 27.0 | 115VAC 60Hz 9.5A 1140W | 15 SCFM @ 90 PSIG | Up to 28 | 150 (0,76) | 2" 3M™ AccuGlide™ 4 | |
| 7000r3 HS Pro | | | | 2.7* | | | | | | | | 38.13* | |

*Requires special setup.

Side Belt Drive Systems

| Machine | Drive System | Box Size Capacity (inches) | | | | | | Power Requirements | | Operating Rate (cs/min) | Belt-Drive Speed ft/min (m/s) | Taping Head | Comments |
|---------------|--------------|----------------------------|-----|------|---------|------|--------------|-----------------------------------|---------------------|-------------------------|-------------------------------|----------------------|-----------------------|
| | | Minimum | | | Maximum | | | Electrical | Air | | | | |
| | | L | W | H | L | W | H | | | | | | |
| 800r | Side | 8.0 | 4.0 | 5.0 | N/L | 20.0 | 21.0 [25,25] | 115VAC 60Hz 3.8A 440W | 3.75 SCFM @ 85 PSIG | Up to 20 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Semi-Automatic Random |
| 800r3 | | | | | | | | | | | | 3" 3M™ AccuGlide™ 3 | |
| 800rks | Side | 15.0 | 6.0 | 12.0 | N/L | 30.0 | 50.0 | 208/240VAC 3Ph 60Hz 6.6A 1500W | 6.25 SCFM @ 85 PSIG | Up to 10 | 78 (0,4) | 3" 3M™ AccuGlide™ 2+ | Random King Size |
| 800rf | Side | 8.0 | 5.5 | 6.0 | 24.0 | 20.0 | 20.0 | 208/240VAC 3Ph 60Hz 5.5A 1300W | 7.0 SCFM @ 75 PSIG | Up to 10 | 100 (0,5) | 2" 3M™ AccuGlide™ 3 | Fully-Automatic |
| 800rf3 | | | | | | | | | | | | 3" 3M™ AccuGlide™ 3 | |

Standard size capabilities are listed above. If additional sizes can be met, they are indicated by [Taping Head] or [Machine Configuration]. Changing the taping head or machine configuration will allow for enhanced box height range indicated in the chart above. Please refer to the Instructions and Parts List or 3M representative for more detail.



3M™ AccuGlide™ Taping Head Technology

3M taping heads for easy and accurate case sealing.

3M™ AccuGlide™ Taping Heads are a curvilinear design that applies tape securely with low impact that helps protect even lightweight cartons and contents. Since the combination of box sealing tape and taping head determines carton closure performance, 3M is continually improving both to meet your requirements for productivity and reliability.



3M™ AccuGlide™ 4

Narrow profile taping head designed to fit any case sealing system. Great for higher speed packaging lines.



3M™ AccuGlide™ 3

Raising the speed limit to 100 ft. per minute for easy, consistent and accurate case sealing.



3M™ AccuGlide™ 2+

Speeds up to 80 ft. per minute. Stainless steel option available.



3M™ AccuGlide™ NPH

Designed for case sealers with narrow taping head cavity. Applies tape at up to 100 ft. per minute.



3M™ AccuGlide™ LHB

A low height box taping head that exerts minimum force on case and utilizes shorter tape legs.



3M™ AccuGlide™ HST

Heads available to apply 48mm and 72mm wide tape at case speeds of up to 150 ft. per minute. Unique precision shaft and ball bushing slide ensure precise application.

Customized 3M-Matic™ Equipment

Built around your product needs.

A leading player in case sealing equipment, 3M realizes it's not one size fits all. We have a unique capability to take an existing 3M-Matic™ Case Sealer and customize it to securely seal your unique cartons. Some of our capabilities include width and height modifications, accommodating lighter or heavy weight boxes, and integrating unique tape set ups.



Side Taping



Box Lift for Low Height Cases



Wide Roll Taping

Non-RSC Closure Solutions

A range of solutions can help increase throughput while decreasing packaging costs.

- Solutions for start-ups
- Automation for large companies

3M-Matic™ L-Clip Applicator S867 and S867II

To save cost and time, apply pre-fed 4.5-inch L-Clips of Scotch® Filament or Reinforced Strapping Tapes at up to 50 clips per minute to five panel fold, full overlap, telescoping, tuck fold and other non-standard packages. Dual head applies two clips simultaneously as close as 8 inches apart.



3M-Matic™ Dual L-Clip Applicator S867II

64



Scotch® Filament Tape Box Sealer S634

69



3M-Matic™ L-Clip Applicator S867 with optional U-Clip adapter.

L-Clip

U-Clip

66

67

Table Top L-Clip Applicators

| Features | Box Sealer S634 |
|--------------------------------|---|
| Tape Type(s) | Filament Tape Light Duty Packaging Tape, Upper Scotch® Packaging Tape |
| Can L-Clip These Package Types | Corrugate |
| Applied Tape Length | 4.5 inch (114mm) |
| Tape Width Options | 0.375–1.5 inch (9.5–36mm) |
| Cutting Method | Serrated blade cuts tape as box passes L-Clip application mechanism |

Great L-Clip Closure Solution for Non-RSC Box Styles



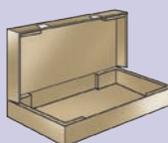
U-Clip Package



Telescoping Box



Custom Box



One Piece Box



F.O.L.



Five Panel Box

68



3M-Matic™ Case Sealers Replacement Parts and Accessories

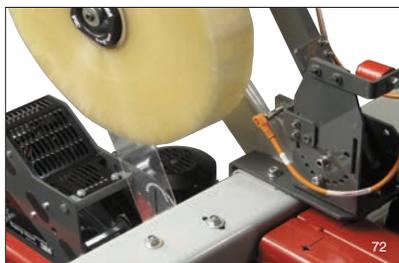
Genuine 3M Parts to maintain optimal performance of 3M-Matic™ Case Sealers.

Engineered for rugged duty with steel construction and epoxy coated surfaces, 3M-Matic™ Case Sealers may have parts that wear and need occasional replacement. 3M maintains stock of a full range of replacement parts from typical wear parts such as blades, belts, and springs to safety labels to bushings and cylinders. With over 5,000 stocked SKUs, replacement parts are available for prompt delivery to your location whether you are doing preventive maintenance or rebuilding a 3M-Matic™ Case Sealer after years of service.

Regular preventive maintenance of your equipment and quality parts are keys to performance of both newer case sealers or models that have been running for 30 years.



**For replacement parts contact CSPD at Combi:
1-800-344-9883**



Application Monitor

With top and bottom sensors, the case sealer mounted programmable logic controller alerts the operator when tape is not applied to the box or not cut, or when tape supply is low on the roll.



Low Tape Indicator Light Kit

An option for 3M-Matic™ Case Sealers. Indicates when tape is getting low.



3-Flap Folder

For increased productivity, easily attached flap folder assists operator in folding the minor (front) and two major (side) flaps of RSCs before taping.



Infeed/Exit Conveyor

Ball bearing steel rollers in a steel frame bolts to the 3M-Matic™ Case Sealer to provide a smooth transition in existing conveyor lines. Provides pack area surface at infeed. Available also in stainless steel.



Box Hold Down Attachment

Holds RSCs on the optional infeed conveyor to free the operator's hands for case filling.



Locking/Swivel Casters

When packaging operations need to be reconfigured or moved, 3M-Matic™ Case Sealers roll to the job on these heavy duty casters. Toe-operated lever locks case sealer in place.

Scotch® and Tartan™ Manual Tape Dispensers

Scotch® Box Sealing Tape Dispenser HR80/HR83

Portable, lightweight, easy to operate, hand-held dispenser with a retractable blade.



Scotch® Low Noise Box Sealing Tape Dispenser H150/H153

A hand-held, roll-on, pistol-grip dispenser designed to reduce the noise of tape unwind.



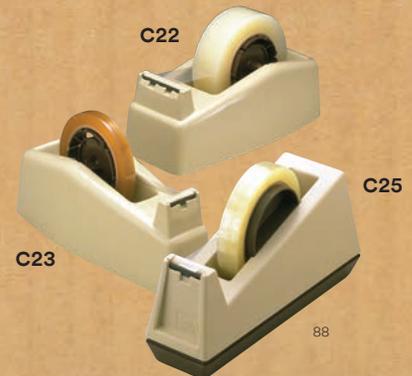
Tartan™ Box Sealing Hand Dispenser HR933

Tape dispenser with a retractable blade.



Scotch® Heavy-Duty Dispensers

Manual heavy-duty dispensers for use with 3M™ Narrow Width Film Tapes.





Scotch® Box Sealing Tape Dispensers

Hand-held dispensers for use with specially formulated Scotch® Box Sealing Tapes.



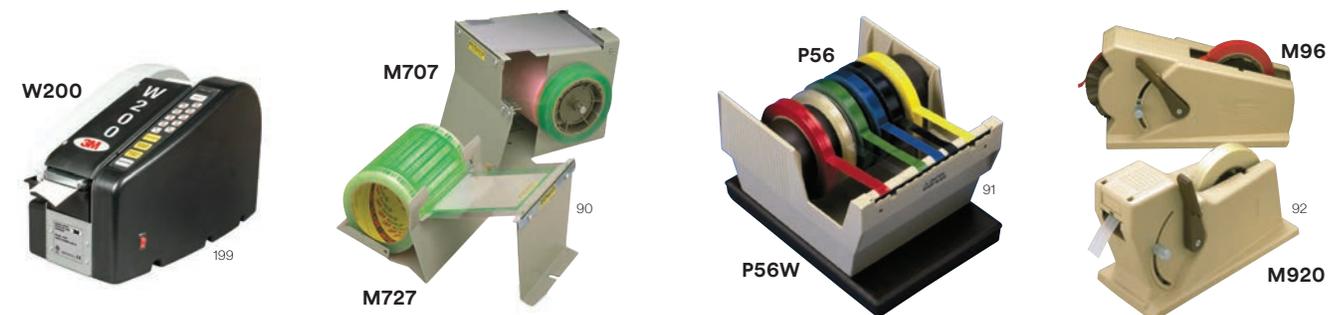
Scotch® Filament Tape Dispensers

Hand-held dispensers for use with Scotch® High Strength Filament Tapes.



Scotch® Bag Sealers

Applies tape in an adhesive-to-adhesive flag seal.



3M™ Electric Water Activated Tape Dispenser

Dispenser has a heated water reservoir that speeds tape activation. Dispenses a pre-set length of water-activated tape at the push of a button. (Manual version also available.)

Scotch® Label Protection Dispensers

Tabletop and portable dispensers designed specifically for 3M™ Label Protection and Pouch Tapes.

Scotch® Multi-Roll Dispenser

Dispenser for pull and tear of up to 6 inches total width of tapes. P56W offers weighted base. (P52/P52W also available for up to 2" total width tape.)

Scotch® Definite Length Dispensers

Dispensers that deliver a uniform length of 3M™ Narrow Width Tape and Scotch® Filament Tapes every time quickly and easily. (M82 and M900 are also available for wider tape dispensing.)

Scotch® and Tartan™ Manual Tape Dispensers

Easy dispensing for manufacturing, office, commercial and retail jobs.

All Scotch® and Tartan™ Manual Tape Dispensers for box sealing tapes, filament tapes, film tapes, label protection tapes and pouch tapes are application-designed to meet the needs of the customer. Select from a variety of hand-held and heavy duty pull-and-tear table top dispensers.

| Product | Product Description | Max Tape Width |
|--|---|----------------|
| Hand-Held Box Sealing Tape Dispensers | | |
| H122 | Durable plastic dispenser with built-in brake for precise seals | 48mm |
| H123 | Lightweight, compact metal tape dispenser | 72mm |
| H128 | Heavy-duty durable metal tape dispenser | 48mm |
| H129 | Quick and easy one hand method to apply, cut, and buff the tape closures | 48mm |
| H150 | Tape dispenser designed to reduce the noise of tape unwind during application | 48mm |
| H153 | Tape dispenser designed to reduce the noise of tape unwind during application | 72mm |
| H180 | Portable and easy to operate pistol grip dispenser | 48mm |
| H183 | Portable and easy to operate pistol grip dispenser | 72mm |
| H190 | Pistol grip dispenser features pull apart design | 48mm |
| H192 | Ergonomical tape dispenser with hand brake | 48mm |
| H320 | Ultra-light, economical, plastic tape dispenser | 48mm |
| HB902 | Economical, compact, and lightweight tape dispenser | 48mm |
| HB903 | Economical pistol grip tape dispenser | 48mm |
| HR80 | Portable, lightweight, easy to operate, dispenser with a retractable blade | 48mm |
| HR83 | Portable, lightweight, easy to operate, dispenser with a retractable blade | 72mm |
| HR933 | Tape dispenser with a retractable blade | 72mm |
| Hand-Held Filament Tape Dispensers | | |
| H10 | Durable, lightweight plastic tape dispenser | 24mm |
| H12 | Portable, plastic dispenser features a hand brake to add tension to the tape roll | 24mm |
| H121 | Durable, metal dispenser allows operator to add tension for a tighter tape application | 24mm |
| H128 | Heavy-duty, metal dispenser commonly used to dispense tapes 8959 and 890 | 48mm |
| H130 | Portable, plastic dispenser features a hand brake to add tension to the tape roll | 18mm |
| H131 | Quick and easy one hand method to apply, cut, and buff the tape closures | 18mm |
| H133 | Quick and easy one hand method to apply, cut, and buff the tape closures | 18mm |
| HB901 | Economical and portable tape dispenser | 24mm |
| Table Top Dispensers | | |
| C22 | Weighted dispenser for easy pull and cut tape dispensing | 2 in |
| C23 | Weighted dispenser for easy pull and cut tape dispensing | 1 in |
| C25 | Weighted dispenser for easy pull and cut tape dispensing | 1 in |
| HB900 | Weighted, slip-proof base for quick and easy one-handed operation | 1 in |
| M82 | Definite length dispenser handles multiple rolls of tape commonly dispensed with filament and light duty tapes | 96mm |
| M96 | Definite length dispenser — dispenses tape in lengths of 3/4 inch to 5 inch per stroke | 1 in |
| M900 | Durable, metal construction dispenses a uniform length of packaging tape from 1-1/2 inch to 16 inch | 3 in |
| M920 | Definite length dispenser — dispenses tape in lengths of 1/2 inch to 4 inch per stroke | 1 in |
| P52 | Mainline tabletop manual pull and cut dispenser with multiple roll capacity | 2 in |
| P52W | Mainline tabletop manual pull and cut dispenser with multiple roll capacity (comes with weighted base) | 2 in |
| P56 | Mainline tabletop manual pull and cut dispenser with multiple roll capacity | 6 in |
| P56W | Mainline tabletop manual pull and cut dispenser with multiple roll capacity (comes with weighted base) | 6 in |
| P448 | Metal dispenser that handles multiple rolls for easy dispensing | 8 in |
| S634 | Semi-automatically applies L-Clip of tape to a box using filament or light duty tapes | 18mm |
| W100 | Manually dispenses pre-set length of water-activated tapes | 3 in |
| W200 | Electronic dispenser — dispenses a pre-set length of water-activated tape at the push of a button | 3 in |
| Specialty Tape Dispensers | | |
| H38 | Durable dispenser specially designed for stretch tapes 8884 and 8886 | 36mm |
| M707 | Heavy duty metal dispenser with auxiliary holder and cutter for 3/4-inch rolls of tape — commonly used with tapes 821 and 823 | 4 in |
| M727 | Metal construction provides easy dispensing of pouch tapes 824, 827 and 829 | 5 in |
| M797 | Metal construction provides easy dispensing of pouch tape 827 | 6 in |
| P400 | Bag sealer — applies tape in an adhesive-to-adhesive — flag seal (includes bag trimmer) | 3/4 in |



3M Systems Tape Agreement

- Save on the overall cost of your case sealing equipment
- Accelerate your packaging equipment Return on Investment
- Receive valuable parts and accessories at no charge
- Help increase productivity and uptime
- Choose options that best fit your needs

Save money
Help accelerate your ROI



The more tape you purchase, the greater your savings!



BUY a new 3M-Matic™ Case Sealer plus Scotch® Box Sealing Tape and GET a cash rebate or accessories at no additional charge!

Earn Cash Rebates*

- ☛ Earn cash rebates when you purchase a new 3M-Matic™ Case Sealer or Combi Packaging Systems equipment and purchase qualifying amounts of Scotch® Box Sealing Tape in accordance with the terms of the program.

Add Credits Towards a New Case Sealer**

- ☑ **Spare parts kits or parts vouchers:**
Earn free spare parts for your 3M-Matic™ Case Sealer when you purchase qualifying amounts of Scotch® Box Sealing Tape
- ☑ **3M™ AccuGlide™ Taping Heads:**
Earn free 3M™ AccuGlide™ Taping Heads for your 3M-Matic™ Case Sealer when you purchase qualifying amounts of Scotch® Box Sealing Tape
- ☑ **Scotch® Manual Tape Dispenser**
Earn a free dispenser when you purchase qualifying amounts of Scotch® Box Sealing Tape

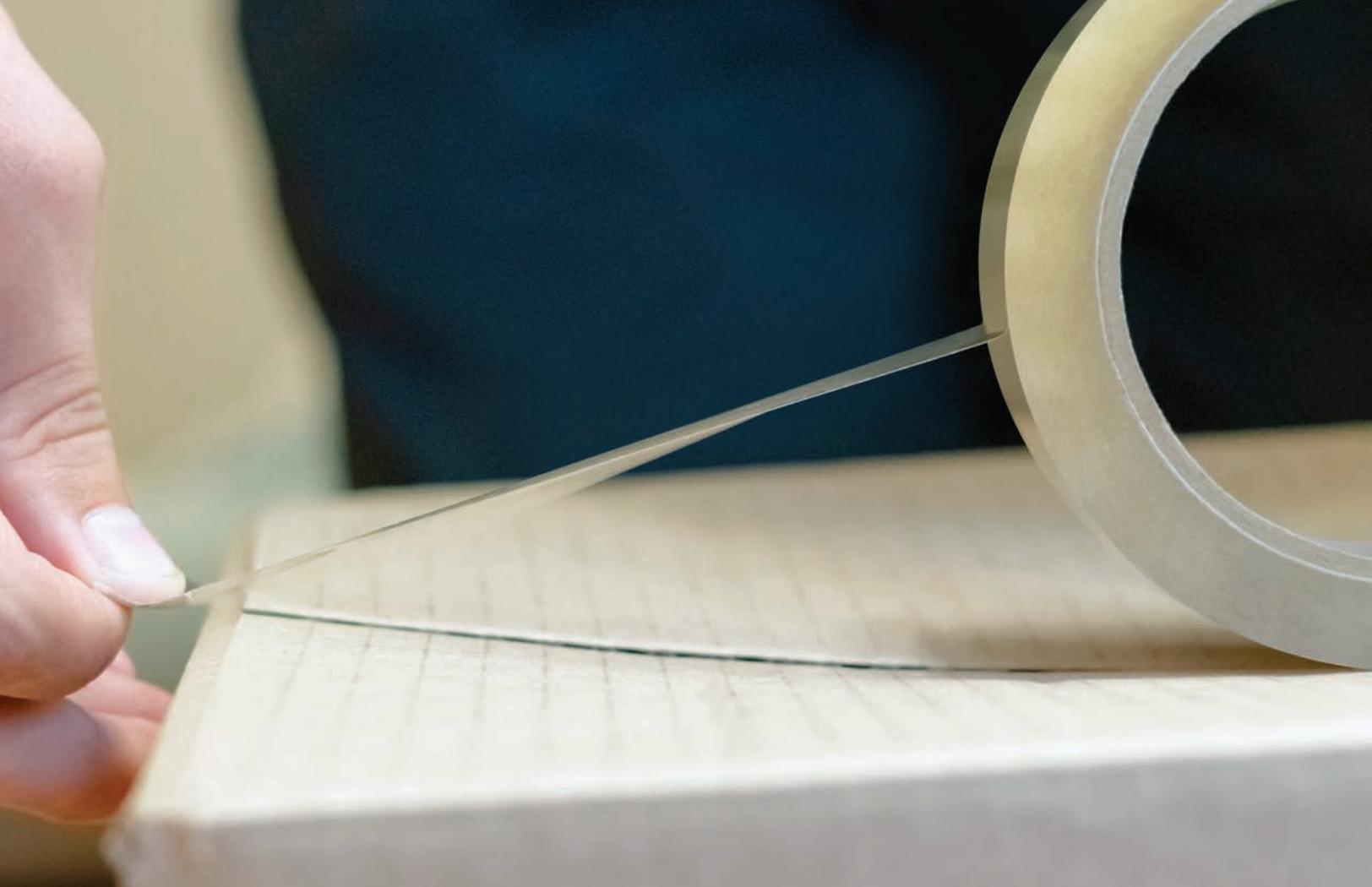


Sign a second 3M Systems Tape Agreement, get another taping accessory at no additional charge.†
3M tape dispensers available with qualifying purchases.

*Rebate check is paid directly from 3M to customer after completing purchase of 3M-Matic™ Case Sealing Equipment and qualifying tape products. Fixed dollar amount of rebate is determined by the model. Other conditions may apply. Contact your 3M Representative for more details.

**3M™ AccuGlide™ Taping Heads, Spare Parts Kits and Hand Dispensers are shipped up front to customer upon signing new tape purchase agreement. Parts Vouchers can be used as needed during the agreement term.

†Purchase requirements for initial Systems Tape Agreement must be satisfied in order to enter into a second agreement.



Box Sealing Tapes

Delivering quality with tapes that keep production lines moving with less interruption and ensure packages are sealed on arrival.



The full job of a package is containment, protection and communication.

Technology that really delivers.

- Seal cartons reliably without the mess, dwell time and equipment maintenance of hot melt adhesive
- Two choices of pressure sensitive adhesive, each with a different combination of properties
- Backing choices for specific performance properties

3M eliminates 99% of organic solvents in production of Scotch® Box Sealing Tape.

Our Scotch® Recycled Corrugate Tape 3073 is made with an adhesive that contains over 10% bio-based content. All recycled corrugate tapes use recycled materials in the core to help with your sustainability goals.

Visit 3M.com/sustainability for more goals.



Caring for the environment now and for the future.

Scotch® Box Sealing Tapes solve common package sealing problems:



Problem: Tabbing

Solution: Easy unwind and high initial adhesion of Scotch® Box Sealing Tapes reduce tabbing downtime and rework.



Problem: Tape popping

Solution: Initial adhesion and holding power of Scotch® Box Sealing Tapes ensure a secure sealing throughout a supply chain.



Problem: Unconventional box closure

Solution: Scotch® Box Sealing Tapes close securely without the holes, waste, appearance, sharp points and disposal of staples.



Problem: Temperature/Humidity

Solution: Scotch® Box Sealing Tapes resist moisture encountered in storage and shipping through the supply chain.

Tape Backing and Adhesive Selection Guide

| | | | |
|---------------------------------------|-------------------------|--|--|
| Step 1 Select Tape Backing | Polyester | <ul style="list-style-type: none"> • Strongest backing • Excellent abrasion resistance • Moisture and chemical resistance | <ul style="list-style-type: none"> • Highest temperature resistance • Transparency |
| | Polypropylene | <ul style="list-style-type: none"> • Strong backing • Good abrasion resistance • Good conformability | <ul style="list-style-type: none"> • Most economical • Transparency |
| Step 2 Select Tape Adhesive | Synthetic Rubber | <ul style="list-style-type: none"> • Excellent holding power • Good initial adhesion above 40°F • Meets ASTM D-5486 government specification | |
| | Acrylic | <ul style="list-style-type: none"> • Excellent initial adhesion over a broad temperature range • Extremely long performance life • UV and chemical resistance | |

Delivering service and support to help you select the right 3M product for your application. On-site consultation with experienced 3M engineers and sales specialists are standing by to help.

Box Sealing Tape Selector

Use this selector to help determine a box sealing tape that meets your packaging needs. **The suggestions provided by this method must be confirmed by testing.** Additional packaging and shipping factors should also be considered.

| Circle the point value that best describes your operations | | |
|--|-------------|--------|
| | Point Value | Points |
| 1. How much does the filled box weigh? | | |
| a. 10 pounds | 10 | |
| b. 20 pounds | 20 | |
| c. 30 pounds | 25 | |
| d. 40 pounds | 30 | |
| e. 50 pounds | 35 | |
| f. 70 pounds | 45 | |
| g. 80 pounds | 50 | |
| h. 100 pounds | 60 | |
| 2. What is the carton burst/ECT test? | | |
| a. 150 SW/26 | 5 | |
| b. 175 SW/29 | 10 | |
| c. 200 SW/32 | 15 | |
| d. 250 SW/40 | 20 | |
| e. 275 SW/44 | 25 | |
| f. 350 SW/55 | 30 | |
| g. 200 DW/42 | 35 | |
| h. 275 DW/48 | 40 | |
| i. 350 DW/51 | 45 | |
| 3. What is the value of contents? | | |
| a. <\$100 | 10 | |
| b. \$100-\$1000 | 25 | |
| c. >\$1000 | 40 | |
| 4. What is the method of shipment? | | |
| a. Palletized and unitized | 5 | |
| b. Palletized but not unitized | 15 | |
| c. Single | 30 | |
| 5. Type of carrier | | |
| a. Company truck | 5 | |
| b. Commercial transport/LTL | 15 | |
| c. UPS/USPS/FEDEX | 30 | |
| Total Points | | |

| Choose an effective closure...choose 3M | | |
|---|---|-------------|
| 205 | | |
| 195 | | 72mm |
| 180 | | |
| 165 | | 72mm |
| 150 | | |
| 135 | | 48mm |
| 120 | | 48mm |
| 105 | | |
| 90 | | 42mm |
| 75 | 72mm | |
| 60 | | 48mm |
| 45 | | 36mm |
| 35 | 42mm | |
| | 36mm | |
| | Scotch® Box Sealing Tape Recommended for Testing | |
| Your Total Points | 3071 | 373 |
| | 371 | 313 |
| | 371+ | 3073 |
| | 311+ | 355 |

These suggestions are based on experience, but there are factors which could alter the overall performance. **For example:**

Cartons with center seam gap greater than 3/4" or over packed/under packed cartons should be tested with 3" (72mm) wide tape

Hard-to-stick surfaces and Recycled Corrugate Boxes, test Scotch® Recycled Corrugate Tape 371+, 3071 and 3073

Box sealing tapes are available custom printed and with standard security messages

Applications when tape is applied under 40°F, test Scotch® Box Sealing Tape 311+, 313 and 3073

If your package is unusual in size, shape, or load, try the 3M Technical Service Request (TSR) Program. Using the 3M TSR Program, a 3M representative will work with you on initial testing of a Scotch® Box Sealing Tape. One or two best options will be identified then a sample of your substrate is brought to the 3M Laboratories and tested for stress or other factors the product will encounter. The 3M test results will help you select the best box sealing tape for your manufacturing process and customer needs.

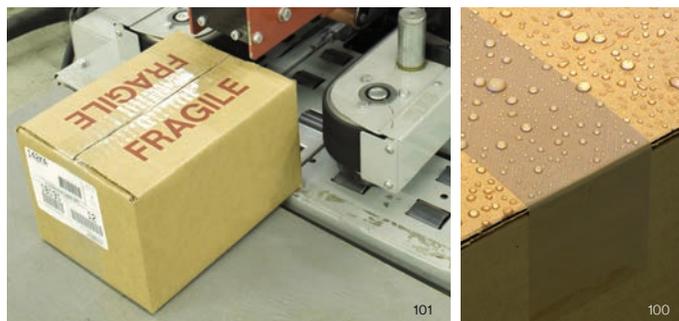


Scotch® and Tartan™ Box Sealing Tapes

Dependability for food and beverage, electronics, e-fulfillment, pharmaceuticals and more.

With choices of polyester or polypropylene backings and synthetic rubber or acrylic adhesives, you have dependability for a wide variety of box types, sizes, contents, handling situations and storage conditions.

- Reliability even with the stresses of over packed or under packed boxes
- Quick, easy application by hand, manual dispensers or 3M-Matic™ Case Sealers
- Choice of lengths, widths, backings, adhesives and colors to meet specific needs



Consistent quality of Scotch® Box Sealing Tapes means fewer interruptions on your packaging line.

Scotch® Box Sealing Tapes with polyester backing and synthetic rubber adhesive resist the moisture in storage and shipping.



| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|---|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| Scotch® Box Sealing Tapes | | | | | | | |
| 311+ | | 38 (42) | 25 (438) | 125 | 1.1 (0.028) | 2.05 (0.052) | |
| 313 | Polypropylene/ Acrylic | 32 (35) | 35 (613) | 125 | 1.6 (0.041) | 2.55 (0.065) | Clear |
| 315 | | 38 (41.5) | 23 (403) | 200 | 2.3 (0.058) | 3.5 (0.089) | |
| 351 | Polyester/ Synthetic Rubber | 78 (85) | 67 (1174) | 130 | 2.0 (0.051) | 3.43 (0.087) | Clear, Tan or Custom Printed |
| 353 | | 45 (49) | 25 (438) | 110 | 1.0 (0.025) | 1.9 (0.048) | Clear, Tan |
| 355 | | 78 (85) | 67 (1174) | 130 | 2.0 (0.051) | 3.43 (0.087) | Clear, Tan or Custom Printed |
| 371 | Polypropylene/ Synthetic Rubber | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | Clear, Tan, Blue, Green, Orange, Red, White, Yellow or Custom Printed |
| 371+ | | 42 (46) | 22 (385) | 160 | 1.2 (0.030) | 1.9 (0.050) | Clear or Custom Printed |
| 373 | | 50 (55) | 30 (525) | 160 | 1.6 (0.041) | 2.5 (0.064) | Clear, Tan, Blue, Green, Orange, Red, White, Yellow or Custom Printed |
| 375 | | 55 (60) | 35 (613) | 160 | 2.0 (0.051) | 3.1 (0.079) | Clear, Tan or Custom Printed |
| Tartan™ Box Sealing Tapes | | | | | | | |
| 302 | Polypropylene/ Acrylic | 14 (15) | 18 (309) | 110 | 1.0 (0.025) | 1.7 (0.042) | Clear, Tan |
| 305 | | 16 (18) | 18 (309) | 110 | 1.0 (0.025) | 1.8 (0.045) | |
| 369 | Polypropylene/ Synthetic Rubber | 30 (33) | 19 (333) | 160 | 1.0 (0.025) | 1.6 (0.041) | |

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



Scotch® Recycled Corrugate Tapes

With environmental standards changing rapidly and companies constantly seeking new ways to reduce costs and improve their environmental footprint, packaging materials are in a constant state of flux. Scotch® Recycled Corrugate Tapes are designed to help you stay on top of the changes.

- They're tackier than conventional box sealing tapes
- Made with a proprietary adhesive designed specifically for recycled corrugate cartons

Who knows what kind of abuse your box goes through after it leaves your facility? Make sure it stays sealed with Scotch® High Tack Box Sealing Tape 371+.



It's not sealed until it's Scotch® Sealed.

Excellent performance — even on highly recycled corrugated boxes.

Be confident your boxes will stay closed throughout the entire supply chain with industrial-strength Scotch® High Tack Box Sealing Tape 371+.

- Adheres to a wide range of materials, including corrugated boxes with 100% recycled content
- Polypropylene backing with synthetic rubber adhesive conforms around edges and rough surfaces
- Good edge tear and split resistance
- Resists abrasion, moisture, chemicals and scuffing
- Easy to unwind and dispense by hand, with manual dispensers, or with 3M-Matic™ Case Sealers



| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|---|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| 311+ | Polypropylene/Acrylic | 38 (42) | 25 (438) | 125 | 1.1 (0.028) | 2.05 (0.052) | Clear |
| 371+ | Polypropylene/Synthetic Rubber | 42 (46) | 22 (385) | 160 | 1.2 (0.030) | 1.9 (0.050) | Clear and Custom Printed; 10% bio-based content and for use on recycled corrugate cartons |
| 3073 | | 46 (50) | 30 (525) | 160 | 1.6 (0.041) | 2.6 (0.066) | |

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



Scotch® Custom Printed Box Sealing Tapes

Let them know exactly who the package came from.

With every delivery, Scotch® Custom Printed Box Sealing Tape helps you differentiate your packages from the competitors. Whether you include your logo, tagline or other promotional messaging, your package will surely get noticed.

- Printed message won't rub off during transit
- Can be used to print handing instructions or labeling, replacing the need to carry large inventories of various printed cartons
- Adds security by discouraging tampering



224

| | |
|---|---|
| Easily conforms around edges | ✓ |
| Strong seal on rough surfaces | ✓ |
| Holds through wide temperature variations | ✓ |
| Resists moisture in storage and shipping | ✓ |
| Resists nicks and abrasions | ✓ |
| Ideal for food and beverage | ✓ |
| Quick, easy application | ✓ |



225

Scotch® Box Sealing Tapes can be custom printed in up to 10 colors. Choose from the entire library of Pantone® Inks to match your logo brand or theme.

| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|------------------|------------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|---|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| 355CP | Polyester/ Synthetic Rubber | 78 (85) | 67 (1174) | 130 | 2.0 (0.051) | 3.43 (0.087) | Clear, Tan |
| 371CP | Polypropylene/ Synthetic Rubber | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | Clear, Tan, Blue, Green, Orange, Red, White, Yellow |
| 373CP | | 50 (55) | 30 (525) | 160 | 1.6 (0.041) | 2.5 (0.064) | Clear, Tan, Blue, Green, Orange, Red, White, Yellow |
| 375CP | | 55 (60) | 35 (613) | 160 | 2.0 (0.051) | 3.1 (0.079) | Clear, Tan |
| 3071CP | | 45 (49) | 22 (385) | 160 | 1.2 (0.030) | 2.1 (0.053) | For use on recycled corrugate cartons |
| 3073CP | | 46 (50) | 30 (525) | 160 | 1.6 (0.041) | 2.6 (0.066) | 10% bio-based content and for use on recycled corrugate cartons |

PANTONE® is the property of Pantone LLC.

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

Scotch® Cold Temperature Tape

Extreme performance even in cold temperatures.

- Adheres to a variety of surfaces, including on corrugated boxes with over 70% recycled content.
- Can be applied at freezer and refrigeration temperatures of 20°F to 50°F (-6.6°C to 10°C).
- Once applied, performs well on fiberboard boxes subjected to temperatures below 32°F (0°C).
- Quick, easy application by hand, manual dispensers or 3M-Matic™ Case Sealers.



246



226



102

For box packing, sealing and storage below 40°F, Scotch® Box Sealing Tape 311+ seal with a rubber adhesive modified for reliability in the cold.

| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|---------------------------|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| 311+ | Polypropylene/Acrylic | 38 (42) | 25 (438) | 125 | 1.1 (0.028) | 2.05 (0.052) | Clear |

Scotch® Security Tapes

Deter package tampering.

Scotch® Security Box Sealing Tapes are ideal for sealing packages and securing loads with high value contents. Printed messages communicate the need for careful package inspection prior to acceptance and reduce theft during the shipping process. Available with a variety of pre-printed messages.



227



103

228



Scotch® Specialty Box Sealing Tapes

Dependability for security, gapped flap cartons and more.

Starting with the same dependability and durability of Scotch® Box Sealing Tapes, specialty tapes add specialized form and/or functional properties for specific applications.



| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|----------------------------------|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| Box Repair Tapes | | | | | | | |
| 2517 | Kraft Paper/Rubber | 78 (85) | 35 (543) | 2 | 4.5 (0.11) | 6.5 (0.16) | Medium Brown, Excellent splicing |
| 2519 | | 41 (45) | 45 (790) | 2 | 5.5 (0.14) | 7.1 (0.18) | Kraft (Tan) |
| 2525 | Flatback Paper/Rubber | 69 (75) | 49 (858) | 2 | 7.7 (0.19) | 9.5 (0.24) | Orange, Premium splicing |
| 2526 | | 69 (75) | 50 (858) | 4 | 8.0 (0.20) | 9.8 (0.24) | White, Excellent adhesion |

| Product | Tape Structure (Backing/Adhesive) | Basis Weight | Caliper (mils) | Tensile Strength (lbs / in) | Tear Strength (grams) | Available Colors/Comments |
|------------------------------|---|------------------------------------|----------------------------|-----------------------------|-----------------------|--------------------------------------|
| ASTM Test Method | | D-646 | D-645 | D-5803 | D-1922 | |
| Water Activated Tapes | | | | | | |
| 6141 | Paper backing/gummed modified cornstarch based adhesive | 35 | 3.5 | 30 | 72 | Kraft (Tan) or Custom Printed |
| 6142 | | 60 | 5.5 | 44 | 125 | |
| 6143 | | 90 | 7.5 | 58 | 200 | |
| 6144 | Paper backing with filament reinforcement/gummed modified cornstarch based adhesive | 23 / 23 | 4.9 | 45-50 | N/A | Kraft (Tan) or Custom Printed |
| 6145 | | 23 / 23 (Kraft) 30 / 23 (White) | 5.0 (Kraft) 7.3 (White) | 52-57 | N/A | Kraft (Tan), White or Custom Printed |
| 6146 | | 30 / 23 | 6.5 | 60-65 | N/A | Kraft (Tan) or Custom Printed |
| 6147 | | 23 / 23 (Kraft) | 8.5 | 60-65 | N/A | Kraft (Tan) or Custom Printed |

| Product | Tape Structure (Backing/Adhesive) | Adhesion to Steel oz/in (N/100mm) | Tensile Strength lbs/in (N/100mm) | Elongation at Break (%) | Backing Thickness mils (mm) | Total Thickness mils (mm) | Available Colors/Comments |
|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------|---------------------------|--|
| ASTM Test Method | | D-3330 | D-3759 | D-3759 | D-3652 | D-3652 | |
| Security Tapes | | | | | | | |
| 3199 | Polypropylene/Acrylic | 22 (24) | 25 (438) | 125 | 1.1 (0.028) | 2.05 (0.052) | Clear with Red Type: CHECK SEAL BEFORE ACCEPTING |
| 3732 | Polypropylene/Synthetic Rubber | 50 (55) | 30 (525) | 160 | 1.6 (0.041) | 2.5 (0.064) | Tan with Red Type: IF SEAL IS BROKEN CHECK CONTENTS BEFORE ACCEPTING |
| 3771 | | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | White with Red Type: IF SEAL IS BROKEN CHECK CONTENTS BEFORE ACCEPTING |
| 3772 | | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | White with Red Type: FRAGILE HANDLE WITH CARE |
| 3775 | | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | White with Red Type: MIXED MERCHANDISE ENCLOSED |
| 3779 | | 40 (44) | 22 (385) | 160 | 1.2 (0.030) | 1.8 (0.046) | Clear with Red Type: CHECK SEAL BEFORE ACCEPTING |

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

Light Duty Packaging Tapes

Versatility with choices of film backings and adhesives for application success.

Typical Light Duty Applications

- Garment bundling
- Plastic bag closure
- Party tray closure
- Small box closure
- Document envelope closure
- Inner pack box closure



231

Scotch® Light Duty Packaging Tape 640 Clean Removal Apparel

UPVC backing with clean removal acrylic adhesive for a wide variety of fabric finishes and treatments, including for tabbing shirts and underwear.



232

Scotch® Light Duty Packaging Tape 605 Cold Temperature

Polypropylene backing with acrylic adhesive for cold temperature applications, such as closing a plastic tray lid.



233

Scotch® Light Duty Packaging Tape 600 High Clarity

UPVC backing with high tack acrylic adhesive for holding apparel.

Scotch® Color Coding Tape 690

UPVC backing with natural rubber adhesive for sealing and color coding.



234

Variety of Surfaces

- Fabrics
- Molded plastics
- Metals
- Clay-coated paperboard
- Corrugated
- Vinyl and films



Light Duty Packaging Tapes

| Product | Color | Backing Material | Backing Thickness mils (mm) | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion to Steel oz/in (N/100mm) | Elongation (%) | Typical Use | Comments |
|-----------------------------------|--|------------------|-----------------------------|---------------------------|----------------------------------|----------------|-----------------------------------|----------------|--|--|
| Light Duty Packaging Tapes | | | | | | | | | | |
| 600 | Clear | UPVC | 1.5 (0.038) | 2.3 (0.058) | 28 (490) | Acrylic | 32 (35) | 45 | L-Clip closure, attaching, tabbing and holding | Excellent handling, high clarity and long aging |
| 605 | Clear | Polypropylene | 1.6 (0.041) | 2.5 (0.064) | 22 (385) | Acrylic | 27 (30) | 57 | Cold temperature packaging | Cold temperature applications; Complies to FDA Regulations for indirect food contact |
| 610 | Clear | Cellophane | 1.4 (0.036) | 2.3 (0.058) | 23 (402) | Natural Rubber | 33 (36) | 15 | Splicing | High heat applications up to 300°F |
| 640 | Clear | UPVC | 1.2 (0.030) | 1.9 (0.048) | 32 (560) | Acrylic | 22 (25) | 65 | Tabbing and holding of apparel | Clean removal from wide variety of fabrics and substrates |
| 660 | Red | Cellophane | 1.4 (0.036) | 2.5 (0.064) | 20 (350) | Natural Rubber | 50 (55) | 10 | Splicing and easy detection | High heat applications up to 300°F; High adhesion |
| 681 | Clear | UPVC | 1.5 (0.038) | 2.4 (0.061) | 25 (438) | Natural Rubber | 40 (44) | 35 | Sealing | Resists moisture and chemicals; Heat shrinkable; Complies with US FDA 21 CFR 175.105 for indirect food contact |
| 690 | Black, Blue, Green, Red, Yellow, White | UPVC | 1.5 (0.038) | 2.3 (0.058) | 35 (613) | Natural Rubber | 30 (33) | 45 | Color coding | Resists moisture and chemicals; Heat shrinkable |
| 856 | Transparent | Polyester | 1.0 (0.025) | 2.0 (0.051) | 25 (438) | Acrylic | 20 (22) | 90 | Tough backing for good tear resistance | Tough backing for good tear resistance |
| 5910 | Clear | Polypropylene | 1.2 (0.030) | 2.0 (0.051) | 18 (315) | Acrylic | 16 (17) | 90 | Utility grade for light duty packaging | Conforms easily |
| Fingerprint Lifting Tape | | | | | | | | | | |
| 8004 | Clear | Polypropylene | 1.4 (0.036) | 2.0 (0.051) | 18 (315) | Acrylic | 16 (17) | 90 | Ultra clear tape; Handles easily | Lift and preserve physical evidence such as fingerprints |

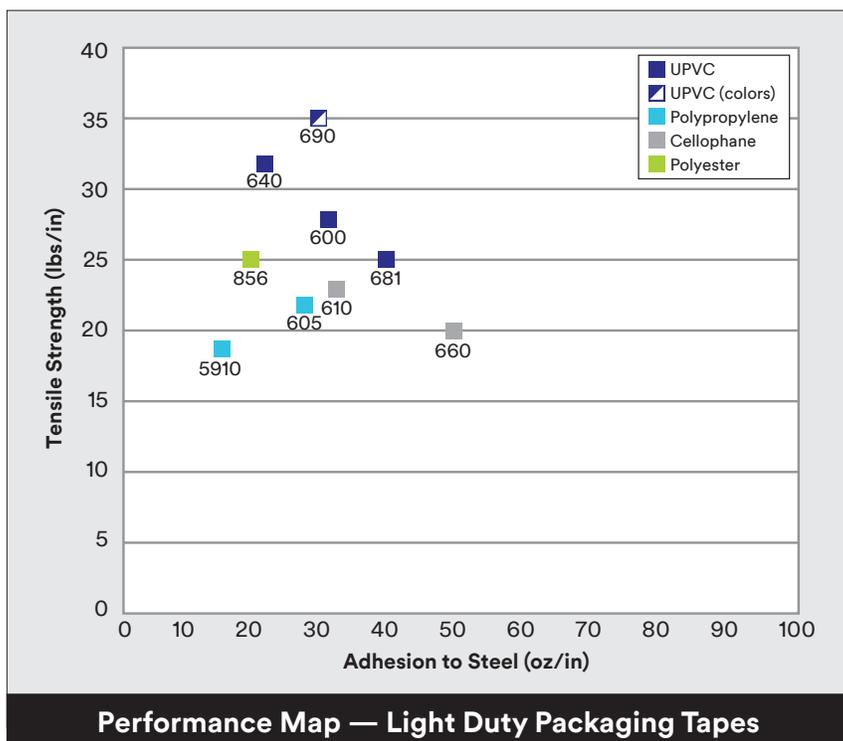
Technologies matched to the applications.

Choice of Backings

- UPVC for transparency plus moisture, chemical and UV resistance; non-staining and heat-shrinkable
- Polypropylene for transparency plus conformability and flexibility
- Cellophane for heat resistance
- Polyester for strength and abrasion resistance

Choice of Adhesives

- Acrylic for long aging and UV resistance
- Rubber for high initial bond strength and adhesion to wide variety of materials including hard-to-bond plastics



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



High Strength Tapes

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



High Strength Tapes

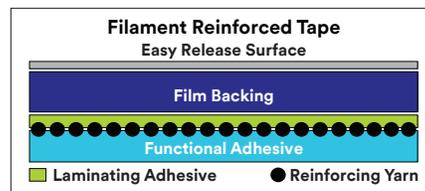
For packaging and non-packaging applications.

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 3M 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.

Streamlined selection for application success.



114



Pallet Unitizing



Carpet Bundling



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 | Tensilized 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 |

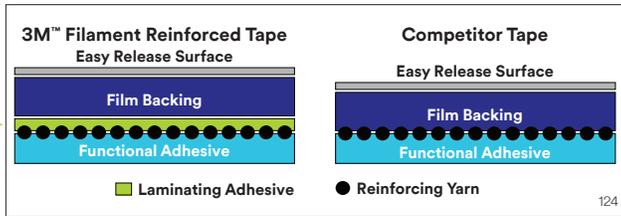
| Product | Description | Tensile Strength* |
|---------|---|-------------------|
| 898 | Glass yarn reinforced, first choice for L- or U-Clip closure of non-RSC boxes | 380 lbs/in |
| 890MSR | Glass yarn reinforced, modified synthetic rubber adhesive for oily surfaces | 600 lbs/in |
| 8899HP | Tensilized polypropylene, clean removal | 160 lbs/in |

*ASTM Test Method D-3759.

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

High Strength Filament Tapes

A 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.



Scotch® High Strength Filament Tape 898



Scotch® High Strength Filament Tape 890MSR (Black)



Tartan™ High Strength Filament Tape 8934



Scotch® High Strength Filament Tape 880

Technologies matched to the applications.

Choice of Adhesives

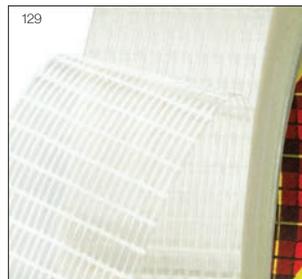
- **SR (Synthetic Rubber):** Versatile, good adhesion to many surfaces
- **MSR (Modified Synthetic Rubber):** Designed for adhesion to oily surfaces
- **RCT:** Designed for adhesion to recycled corrugate and other hard-to-stick-to-surfaces

Choice of Backings

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

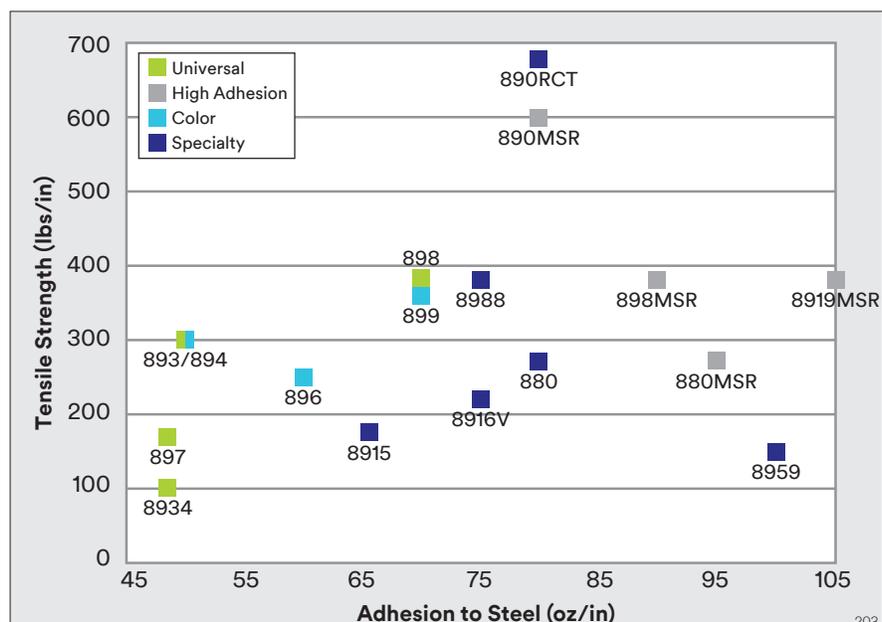
Choice of Filament

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



Scotch® Bi-Directional Filament Tape 8959

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



Performance Map — Filament Reinforced Tapes

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



High Strength Filament Tapes

| Product | Tensile Strength lb/in (N/100mm) | Backing Material | Reinforcement | Total Thickness mils (mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Backing Color | Typical Use and Comments |
|-------------------------------|-------------------------------------|------------------|---------------------|---------------------------------|---------------------------------|---|-------------------|------------------|---|
| ASTM Test Method | D-3759 | | | D-3652 | | D-3330 | | | |
| Universal Filament | | | | | | | | | |
| 898 | 380 (6655) | Polypropylene | Glass Yarn | 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 | Glass Yarn | 5.3 (0.135) | Synthetic Rubber (SR) | 50 (55) | 4 | Clear | Box closing, palletizing, strapping, bundling and reinforcing; High strength |
| 897 | 170 (2977) | Polypropylene | Glass Yarn | 5.0 (0.127) | Synthetic Rubber (SR) | 50 (55) | 4 | Clear | Box closing, palletizing, strapping, bundling and reinforcing; Medium strength |
| 8934 | 100 (1751) | Polypropylene | Glass Yarn | 4.0 (0.102) | Synthetic Rubber (SR) | 48 (53) | 3 | Clear | Box closing, palletizing, strapping, bundling and reinforcing; Utility |
| Colored Filament | | | | | | | | | |
| 899 | 360 (6305) | Polypropylene | Glass Yarn | 6.6 (0.168) | Synthetic Rubber (SR) | 70 (77) | 3 | Red | General bundling and reinforcing; Red color for increased visible and detection |
| 894 | 300 (5254) | Polypropylene | Glass Yarn | 6.0 (0.15) | Synthetic Rubber (SR) | 50 (55) | 4.5 | Black | Pipe bundling and other outdoor applications; High UV resistance |
| 896 | 240 (4203) | Polypropylene | Glass Yarn | 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 (10508) | Polyester | Glass Yarn | 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 | Glass Yarn | 6.0 (0.15) | Modified Synthetic Rubber (MSR) | 90 (99) | 3 | Clear | Metal coil closure; Good adhesion to oily surfaces |
| 8919MSR | 380 (6655) | Polyester | Glass Yarn | 7.0 (0.180) | Modified Synthetic Rubber (MSR) | 105 (110) | 3 | Clear | Metal coil closure; Good adhesion to oily surfaces, Thicker backing for improved handling |
| 880MSR | 270 (4728) | Polyester | Polyester Yarn | 7.7 (0.196) | Modified Synthetic Rubber (MSR) | 95 (104) | 19 | Clear | Metal coil closure; Good adhesion to oily surfaces, High cut resistance |
| Specialty Filament | | | | | | | | | |
| 890RCT | 680 (11909) | Polyester | Glass Yarn | 8.0 (0.203) | Synthetic Rubber (RCT) | 80 (88) | 5 | Clear | Basiloid, Heavy appliance lifting; Good adhesion to recycled corrugate |
| 8988 | 380 (6655) | Polypropylene | Glass Yarn | 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 Yarn | 7.7 (0.196) | Synthetic Rubber (SR) | 80 (88) | 19 | Clear | Pipe and conduit, bundling and color coding; Excellent shock resistance |
| 8959 | 150 (2627) | Polypropylene | Bi-Directional Yarn | 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 |
| 8916V | 210 (3678) | Polypropylene | Glass Yarn | 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 | Glass Yarn | 6.0 (0.15) | Synthetic Rubber (SR) | 65 (71) | 3 | Clear | Appliance, Secure and stabilize parts; Clean removal |

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

Tensitized 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

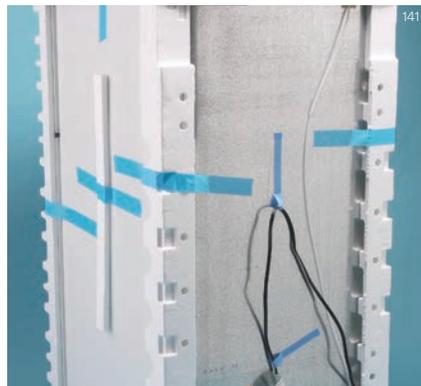


12



140

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



141

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



201

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/100mm) | Backing Material | Reinforcement | Total Thickness mils (mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Color | Typical Use and Comments |
|-------------------------|-------------------------------------|------------------|---------------|---------------------------------|------------------|---|-------------------|--------------------------|--|
| ASTM Test Method | D-3759 | | | D-3652 | | D-3330 | | | |
| 8899HP | 160 (2802) | Polypropylene | None | 4.8 (0.12) | Rubber | 45 (49) | 30 | Blue/ Ivory/ White | Secure and stabilize parts, clean removal and high/low temperature performance |
| 8898 | 160 (2802) | Polypropylene | None | 4.6 (0.117) | Synthetic Rubber | 75 (82) | 32 | Blue/ Ivory | Appliance, Secure and stabilize parts; Clean removal, High adhesion |
| 860 | 110 (1926) | Polypropylene | None | 2.8 (0.071) | Synthetic Rubber | 45 (49) | 33 | Black | General bundling and strapping; Utility grade for pallet unitizing |

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



Scotch® Reinforced Strapping Tapes

3M's **CLEAREST** high-strength tape available.



Why 3M?

Strong: Polypropylene backing extruded to create monofilament "ribs"

Secure: Resists nicking, cutting, tearing or puncturing during handling

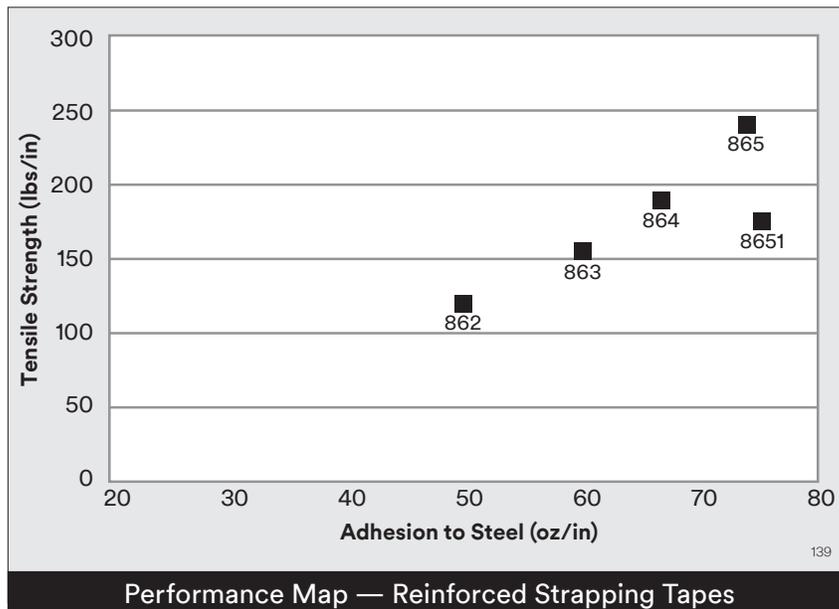
Clear: No filaments to obstruct graphics



Scotch® Reinforced Strapping Tape 8651



Scotch® Reinforced Strapping Tape 862



| Product | Clarity to Showcase Marketing Content | Barcode Scannable | Resists Nicks | Resists Abrasion | Does it Scratch? |
|----------------------------------|---------------------------------------|-------------------|---------------|------------------|------------------|
| A. Reinforced Strapping Tape | Yes | Yes | Yes | Yes | No |
| B. Reinforced Gummed Paper Tape | No | No | Yes | Somewhat | No |
| C. Staples | Somewhat | No | N/A | N/A | Yes |
| D. Filament Tape | Somewhat | No | Yes | Yes | No |
| E. Tensitized Polypropylene Tape | No | No | No | Yes | No |

| Product | Tensile Strength lb/in (N/100mm) | Backing Material | Reinforcement | Total Thickness mils (mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Color | Typical Use and Comments |
|--------------------------------|----------------------------------|------------------|---------------|---------------------------|------------------|-----------------------------------|----------------|-------------|--|
| ASTM Test Method D-3759 | | D-3652 | | | D-3330 | | | | |
| 865 | 240 (4203) | Polypropylene | Polypropylene | 6.4 (0.163) | Synthetic Rubber | 74 (81) | 30 | Clear | Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable |
| 864 | 190 (3327) | 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 (3065) | 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 (2714) | Polypropylene | Polypropylene | 5.0 (0.127) | Synthetic Rubber | 60 (66) | 30 | Clear | Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable |
| 862 | 120 (2102) | Polypropylene | Polypropylene | 4.6 (0.117) | Synthetic Rubber | 50 (55) | 30 | Clear/Black | Pipe Bundling; Black for UV resistance |

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

Scotch® Stretchable Tapes

Tape that gets stronger as it's S-T-R-E-T-C-H-E-D

- Adhesive “de-tackifies” when stretched: holds in place but won't damage carton graphics, shipping instructions or other pallet information when removed
- 650% stretch factor: 55-meter roll yields 357 meters of tape
- Creates ventilated load for shipment of time- and temperature-sensitive goods
- More stability — less waste



144



145

High yield! One 55-meter roll can unitize 60 or more A- or B-style pallets for intra-plant movement.



146

“X”-pattern can contain loads for shipment anywhere.



147

Less waste! Compare the 3M™ Stretchable Tape waste “ball” on the left versus the size of typical stretch film waste on the right.



148



149



89

Scotch® Stretchable Tape Dispenser H38

Hand-held dispenser with tensioning/stretching brake for use with Scotch® Stretchable Tapes (see page 16).

| Product | Tensile Strength lb/in (N/100mm) | Backing Material | Total Thickness mils (mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Color | Comments |
|------------------|-------------------------------------|------------------|------------------------------|------------------|--------------------------------------|-------------------|-------|---|
| ASTM Test Method | D-3759 | | D-3652 | | D-3330 | | | |
| 8886 | 28 (490) | Polyethylene | 7.0 (0.18) | Synthetic Rubber | 65 (71) | 720 | Clear | Load containment |
| 8884 | 20 (350) | Polyethylene | 5.0 (0.127) | Synthetic Rubber | 70 (77) | 710 | Clear | Palletizing for intra-plant movement; Load containment; For hand application using Scotch® Stretchable Tape Dispenser H38 |

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



Custom Packaging Solutions

3M™ Carry Handles

Applied at Retail Checkout

Convenience for your customer.

- Pre-cut padded carry handles for easy application
- Quickly and easily transform bulky purchases into travel-friendly packages
- Custom print! Put your BRAND in consumer's hands
- Custom size to meet your store profile
- Great alternative to large retail shopping bag. Save a bag...offer a handle
- Reduce plastic waste by 97%* by offering a carry handle

*Based on weight of large plastic bag of 75 grams vs. 3M™ Carry Handle of 2.5 grams.



Pre-Applied By Manufacturer

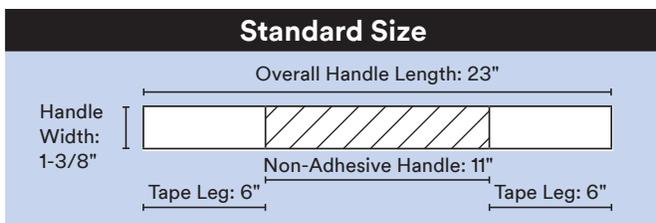
Give your products a lift.

- Differentiate your on-shelf appeal — customers will associate convenience with your brand
- Easily combine two stand up pouches for a unique duo-pouch solution
- Printed handles communicate — drive brand awareness, augment or replace other package information
- Convenience: Promo packs and up-sized SKUs can be easily carried from store to car or bus to home or office
- Ask your 3M Packaging Specialist for details on automated application equipment
- Range of carry handle options — pre-cut (hand applied) or in-line pre-laminated (machine applied)





3M™ Carry Handles



Weight

carry handle 2.5g

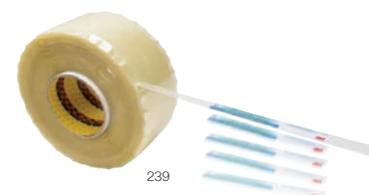
large retail plastic bag 75.0g

Reduce plastic waste by **97%**



Pre-cut padded carry handles for hand application.

| Product | Weight Holding Capacity (lbs) | Tape Material | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion oz/in (N/100mm) | Pads per Case | Handles per Case | Handle (W x L) | Tape Leg Length |
|------------------|-------------------------------|---------------------------|---------------------------|----------------------------------|------------------|--------------------------|---------------|------------------|----------------|-----------------|
| ASTM Test Method | | | D-3652 | D-3759 | D-3330 | | | | | |
| 8310 | 10 | Polypropylene | 3.1 (0.079) | 35 (613) | Synthetic Rubber | 55 (60) | 110 | 2750 | 1" x 17" | 3" |
| 8315 | 15 | Polypropylene | 3.2 (0.081) | 35 (613) | Synthetic Rubber | 55 (60) | 80 | 2000 | 1-3/8" x 23" | 6" |
| 8320 | 20 | Polyester | 3.5 (0.089) | 67 (1174) | Synthetic Rubber | 78 (85) | 110 | 2750 | 1" x 17" | 3" |
| 8330 | 30 | Polyester | 3.5 (0.089) | 67 (1174) | Synthetic Rubber | 78 (85) | 80 | 2000 | 1-3/8" x 23" | 6" |
| 8340 | 40 | Reinforced Strapping Tape | 5.6 (0.142) | 190 (3325) | Synthetic Rubber | 67 (73) | 80 | 2000 | 1-3/8" x 23" | 6" |
| 8350 | 50 | Filament Tape | 7.7 (0.196) | 270 (4728) | Synthetic Rubber | 80 (88) | 80 | 2000 | 1-3/8" x 23" | 6" |



In-line carry handles for automated application. Enables quick change over of marketing message.

| Product | Weight Holding Capacity (lbs) | Tape Material | Adhesive Type | Adhesion oz/in (N/100mm) | Tensile Strength lb/in (N/100mm) | Total Thickness mils (mm) | Roll Type | Roll (W x L) | Core Dia. |
|---------|-------------------------------|---------------|------------------|--------------------------|----------------------------------|---------------------------|--------------|--------------|-----------|
| 8346 | 20 | Polyester | Synthetic Rubber | 31 (34) | 70 (1220) | 3.4 (0.086) | Level- wound | 1" x 3280 yd | 6" |
| 8347 | 20 | Polypropylene | Synthetic Rubber | 50 (55) | 103 (1800) | 2.56 (0.065) | Level- wound | 1" x 5470 yd | 6" |
| 8346HP | 20 | Polyester | Synthetic Rubber | 52 (57.0) | 67 (1174) | 3.4 (0.086) | Level- wound | 25mm x 3000m | 6" |



Pre-laminated carry handles for automated application. Perfect for long runs with limited change overs.

| Product | Weight Holding Capacity (lbs) | Handle Material | Adhesive Type/Backing | Adhesion oz/in (N/100mm) | Tensile Strength lb/in (N/100mm) | Total Thickness mils (mm) | Roll Size/Format | Core Dia. | Suggested Use |
|---------|-------------------------------|-----------------|----------------------------|--------------------------|----------------------------------|---------------------------|--|-----------|------------------------------------|
| 8381 | 30 | Multiple* | Synthetic Rubber/MOPP | 55 (60) | 90 (1580) | 2.8 (0.071) | MAX OD 380mm (15") Plantery or Level-wound Formats | 6" | General purpose |
| 8383 | 20 | Multiple* | Synthetic Rubber/MOPP | 48 (53) | 90 (1580) | 2.8 (0.071) | | 6" | Apply on films |
| 8393 | 20 | Multiple* | Synthetic Rubber/Polyester | 50 (55) | 50 (880) | 2.8 (0.071) | | 6" | Apply on shrink wrap before tunnel |

*Available materials include: paper (2 grades), clear polyethylene, white polyethylene, polypropylene foam or polyethylene foam.

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

Scotch® Multipack Tapes

Economical and sustainable alternative to shrink films, banding, boxes and bags.

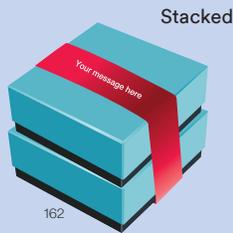
- Effective way to bundle consumer products into multipacks and value packs
- Clear, strong tape holds firmly and removes cleanly without damaging the primary package graphics
- Custom-print tape option delivers your branding and promotional messaging, as well as multipack barcoding



Marketing messages can be custom printed on this transparent, repositionable tape.

Discrete tape highlights primary packaging.

A Full Selection of Bundling Options



Custom carry handle option for convenience



Learn more about the Multipack Solution online. You'll find videos, and both tape and equipment details at 3M.com/Multipack

| Product | Color | Backing Material | Backing Thickness mils (mm) | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion to Steel oz/in (N/100mm) | Elongation (%) | Comments |
|---------|-------|------------------|-----------------------------|---------------------------|----------------------------------|------------------|-----------------------------------|----------------|--|
| 697 | Clear | Polypropylene | 1.6 (0.040) | 1.9 (0.049) | 23 (409) | Acrylic | 4.78 (5.23) | 77 | Clean removal tape designed for multi-unit primary packaging; Apply manually or with automated equipment; 697CP is a custom printed version |
| 697CP | | | | | | | | | |
| 699 | Clear | Polypropylene | 1.6 (0.041) | 2.6 (0.066) | 30 (525) | Synthetic Rubber | 46 (50) | 160 | Designed for bundling multi-unit primary packaging; Combine with 3M™ Carry Handles for bundling pouches; Apply manually or with automated equipment; 699CP is a custom printed version |
| 699CP | | | | | | | | | |

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

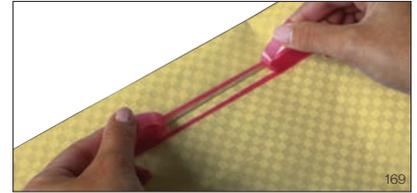


Bag Sealing Tapes

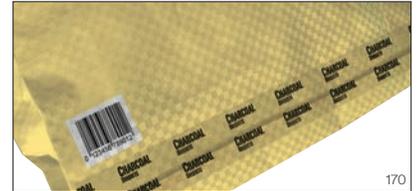
Stronger, faster, clearer than stitching closure for eye-popping woven polypropylene bags.

Featuring tough, transparent tapes that instantly seal a wide range of bag types and materials. Scotch® Bag Sealing Solutions can accelerate your entire end-of-line operation, while improving the visual impact of your packaging.

- Cut downtime and potentially double your throughput over traditional bag closing systems
- Improve bag appearance and enhance shelf appeal with woven polypropylene bags
- Eliminate the hassles of traditional mechanical stitchers and the messy glue pots that come with adhesive closure systems
- Give customers an easy-open alternative
- Reduce bag leakage and improve quality control



3M™ Transparent Film Tape 8470 with Scotch® Easy Open Tear Strip Tape 8622.



Custom printed tape for proof of factory seal.

| Product | Color | Backing Material | Backing Thickness mils (mm) | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion to Steel oz/in (N/100mm) | Elongation (%) | Comments |
|---------|-------|--------------------------|-----------------------------|---------------------------|----------------------------------|-------------------------------|-----------------------------------|----------------|---|
| 8469 | Clear | Polyester | 2.2 (0.051) | 3.0 (0.076) | 63 (1104) | Synthetic Rubber | 75 (81) | 130 | Excellent tear, impact and abrasion resistance; 8469CP is a custom printed version |
| 8469CP | | | | | | | | | |
| 8470 | Clear | Polypropylene | 2.0 (0.051) | 3.1 (0.079) | 36 (615) | Synthetic Rubber | 55 (60) | 160 | Good adhesion to variety of surfaces including polypropylene, paper, polyethylene; 8470CP is a custom printed version |
| 8470CP | | | | | | | | | |
| 8622 | Red | Reinforced Polypropylene | 8.4 (0.21) | | 190 (3320) | N/A No Functional Adhesive | | 30 | Easy open feature when used with Scotch® Film Tape for heavy bag sealing |

3M™ Tape Pads

No dispenser? No problem!

- **Portable** “peel and stick” convenience, 25 sheets per pad
- **Adheres** to bags, boxes, plastic film, powder coats, metals and glass
- **Removable tab** for easy handling
- **Stores easily** in pockets, drawers, tool boxes and part carts
- **Used to repair, patch, seal, protect, reinforce, close and trap**



3M™ Packaging Tape Pad 3750P



3M™ Tape Sheets 822

| Product | Sheet Size(s) | Color | Tape Material | Total Thickness mil (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Tab |
|---------|---------------------------------|--------------------------|---------------|--------------------------|----------------------------------|------------------|-----------------------------------|----------------|------------------------|
| 809G | Custom Size | Transparent, Red, Yellow | Polypropylene | 3.1 (0.079) | 35 (613) | Synthetic Rubber | 55 (60) | 160 | Removable or Permanent |
| 809GP | Custom Size w/ Custom Print | | | | | | | | |
| 809S | Custom Size w/ Custom Backsheet | Transparent | Polypropylene | 3.1 (0.079) | 35 (613) | Synthetic Rubber | 55 (60) | 160 | Removable or Permanent |
| 822 | 4" x 6" | Transparent | Polypropylene | 3.1 (0.079) | 35 (613) | Synthetic Rubber | 55 (60) | 160 | Removable |
| 3750P | 2" x 6" | | | | | | | | |

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

Scotch® Bag Conveying Tape

- A high performance tape designed to convey a food grade preservation bag through the bag manufacturer's forming and packaging process
- Product constructions with or without reinforcement can meet a range of price/performance needs
- The pressure sensitive adhesive is specifically formulated to provide consistent adhesion to polyethylene

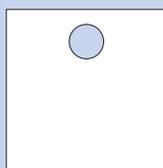
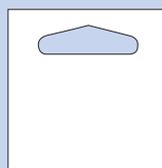


| Product | Tensile Strength lb/in (N/100mm) | Backing Material | Reinforcement | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Total Thickness mils (mm) | Elongation (%) | Color | Width(s) | Core Size |
|------------------|----------------------------------|------------------|---------------|------------------|-----------------------------------|---------------------------|----------------|-------|------------|-----------|
| ASTM Test Method | D-3759 | | | | D-3330 | D-3652 | | | | |
| 8635 | 140 (2452) | Polyethylene | None | Synthetic Rubber | 62 (68) | 4.0 (0.102) | 60% | Black | 6mm 9mm | 6 in |

3M™ Hang Tabs

- Clear, durable, polyester tabs with a pressure-sensitive adhesive for easy in-store repair of damaged packaging such as torn punches in chipboard header cards
- Clear tabs do not obscure packaging graphics — showcases existing packaging graphics and messaging
- Pre-cut, bendable tab format for convenience and ease of use
- Sticks to most product or packaging surfaces for store display applications



| Hole Styles for Hang Tags | | |
|--|--|---|
|  <p>J-Hook</p> <p>Consumer-friendly option, encourages item selection from anywhere on peg</p> |  <p>Round Hole</p> <p>For single-wire pegs</p> |  <p>Delta Hole</p> <p>For wider double-wire pegs or self-centers on standard pegs</p> |



| Product | Size (H x W) | Hole Style | Color | Hang Tabs per Pad | Backing Material | Total Thickness mil (mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) |
|-------------|---------------|------------|-------|-------------------|------------------|--------------------------|------------------|-----------------------------------|
| 1072 | 1-3/8" x 7/8" | J-Hook | Clear | Individual | Polyester | 25.8 (0.66) | Synthetic Rubber | 175 (192) |
| 1074 | 1" x 2" | Round | Clear | 10 per pad | Polyester | 13.5 (0.34) | Synthetic Rubber | 55 (60) |
| 1075 | 2" x 2" | Delta | Clear | 10 per pad | Polyester | 13.5 (0.34) | Synthetic Rubber | 55 (60) |
| 1076 | 2" x 2" | Round | Clear | 10 per pad | Polyester | 13.5 (0.34) | Synthetic Rubber | 55 (60) |

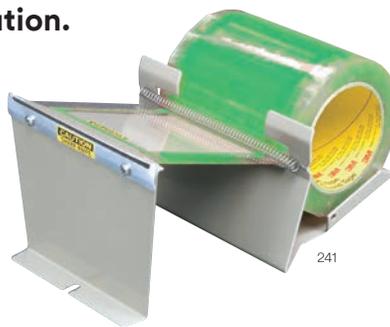
Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.



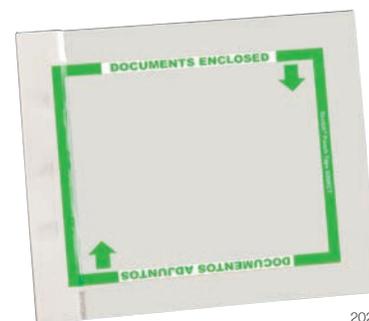
Scotch® Pouch Tapes

Strong, low-profile attachment solution.

- “Trap it” with unique 3M tape construction — strong adhesive tape area on the edges frame the large, clear non-adhesive window area in the middle
- Attach documents, packing lists, invoices, literature, catalogs, brochures, or even product samples, small part packets or other merchandise
- Synthetic rubber adhesive sticks well to corrugate and many other substrates
- Custom-print option can personalize your message



Scotch® Pouch Tape Dispenser M727 with Scotch® Pouch Tape 824RCT — Available in rolls for easy dispensing at pack stations.



Scotch® Pouch Tape Sheets 830RCT are available in pads for portable back-pocket convenience. No liners help keep work areas clean of debris.

| Product | Individual Pouch Size (h x w) | Printed Message | Applications | Core Size | Material Type | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Dispenser Options |
|--------------|--------------------------------|----------------------|--------------|-----------|---------------|---------------------------|----------------------------------|------------------|-----------------------------------|-------------------|
| Pads | | | | | | | | | | |
| 830RCT | 5" x 6" 6" x 10" | "Documents Enclosed" | 25 per pad | — | Polypropylene | 2.6 (0.066) | 30 (525) | Synthetic Rubber | 46 (50) | — |
| Rolls | | | | | | | | | | |
| 824RCT | 5" x 6" 5" x 8" 6" x 10" | "Documents Enclosed" | 500 per roll | 3" | Polypropylene | 2.6 (0.066) | 30 (525) | Synthetic Rubber | 46 (50) | M727 or M797 |

Label Protection Tapes

Protect labeled shippers, mailers, envelopes, tubes, drums, tubs.

- Tape material options for use on wide range of substrates
- High clarity for sharp read-through accuracy
- Bright color tape option draws attention to important label content



| Product | Roll Width(s) Available | Roll Length | Color | Backing Material | Total Thickness mils (mm) | Tensile Strength lb/in (N/100mm) | Adhesive Type | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Comments |
|---------|-----------------------------|-------------|-------|------------------|---------------------------|----------------------------------|------------------|-----------------------------------|----------------|--|
| 821 | 2", 3", 4", 5", 6" | 72 yd | Pink | Acetate | 2.5 (0.063) | 12 (210) | Acrylic | 25 (27) | 15 | Low-glare matte finish. Write-on surface; Hand-tearable — no dispenser needed |
| 856 | 1", 1.5", 2", 3", 4", 6" | 72 yd | Clear | Polyester | 2.0 (0.051) | 25 (438) | Acrylic | 20 (22) | 90 | Excellent transparency and resistance to abrasion, moisture and chemicals; Go-to option for outdoor applications |
| 3565 | 96mm, 120mm | 100m | Clear | Polypropylene | 1.9 (0.048) | 22 (385) | Synthetic Rubber | 40 (44) | 160 | Excellent transparency and conformability; Resists tearing, splitting, moisture, abrasion and smudges |
| 3765 | 96mm, 120mm, 144mm | 132m | Clear | Polypropylene | 1.5 (0.038) | 20 (350) | Acrylic | 22 (24) | 119 | Good transparency; Recommended for cold temperature applications |

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

3M™ Packing List Envelopes

Wide variety of choices for document control and protection.

- Convenient peel-and-stick document protection
- Non-printed and printed with standard messages
- Custom sizes and/or custom printed messages
- Reclosable 3M™ Zipper Closure Envelope is available in two sizes
- Polyethylene backing/synthetic rubber adhesive/paper liner
- Backing thickness: 2.0 mil;
Total thickness: 5.0 mil



Easy Inspection — For cross border shipping and other inspection situations, zipper closure envelopes open easily and close securely. Tough construction resists moisture and abrasion.



Secure Adhesion — High tack pressure sensitive adhesive on the back of the envelope grabs on contact and holds securely even to curved and flexible surfaces.

T (Top Printed)

| | | |
|---|--|---|
| <p>T1 Packing List/ Invoice Enclosed 4.5" x 5.5" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>T1 INV Invoice Enclosed 4.5" x 5.5" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>T3 Packing List/ Invoice Enclosed 7" x 5.5" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">top-load</p> |
| <p>T1 PL Packing List Enclosed 4.5" x 5.5" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>T2 Packing List/ Invoice Enclosed 4.5" x 6" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>T4 Packing List/ Invoice Enclosed 5.5" x 10" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> |

NP (Non-Printed)

| | |
|--|--|
| <p>NP1 No Print (Clear) 4.5" x 5.5" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>NP6 No Print (Clear) 9.5" x 12" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> |
| <p>NP2 No Print (Clear) 4.5" x 6" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | <p>NP9 No Print (Clear) 7" x 6" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">top-load</p> |
| <p>NP3 No Print (Clear) 5.5" x 7" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">top-load</p> | <p>FED1 No Print (Perfed) 6.75" x 10.75" 500/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">top-load</p> |
| <p>NP4 No Print (Clear) 5.5" x 10" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | |
| <p>NP5 No Print (Clear) 7" x 10" 1,000/case</p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">side-load</p> | |

F (Full Face Printed)

F1
Packing List/
Invoice Enclosed
4.5" x 5.5"
1,000/case



side-load

Zipper Closure Envelopes

| | |
|--|--|
| <p>NPZ-L No Print (Clear) 8.5" x 11.5" 500/case</p> | <p>NPZ-XL No Print (Clear) 10" x 12.5" 500/case</p> |
|--|--|

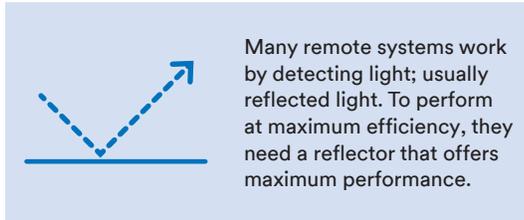


side-load



Remote Sensing Tapes

3M retroreflective materials make it easy to design sensing systems based on simple, inexpensive photoelectric sensors. They increase readability, range and accuracy with greater control.



3M™ Prismatic Remote Sensing Target 3000X

- Micro-cube corner sheeting made of a flexible synthetic resin which will perform well with polarized light
- Smooth, clear surface can be cleaned easily
- Aggressive pressure sensitive adhesive provides an excellent bond to most clean, wax-free, dry, relatively non-porous, weather resistant surfaces
- Adhesive is protected by a liner which is removed at the time of application and the reflector is pressed into position

Scotch® Photoelectric Scanning Tape 7800

- Exposed-lens retroreflective tape with a pressure-sensitive adhesive that is designed for use as expendable code marks in automatic warehouse or conveyor operations
- This product affords exceptional contrast with its background for increased accuracy, reliability, and depth-of-field in photoelectric sorting and classification systems and may be employed with automatic on-line applicators or manual dispensers for identification or simple sortation of paperboard shipping containers

3M™ Scotchlite™ Photoelectric Grade Smooth Surface Sheeting 7590

- Durable, flexible, wide angle, smooth-surface, retroreflective sheeting, specially designed for use in photoelectric applications such as retroreflective labels or marks
- Sheeting consists of special lens elements enclosed within a transparent resin, having a smooth flat outer surface and is supplied with a low-temperature, pressure-sensitive adhesive protected by a removable liner

3M™ Scotchlite™ High Gain Reflective Sheeting 7610

- High gain reflective industrial grade sheeting, exposed-lens, retroreflective, plastic-based material, pre-coated with a pressure-sensitive adhesive
- Adhesive is covered with a removable protective liner that offers a very high retroreflective efficiency and small optical elements

| Product | Tape Structure (Backing/Adhesive) | Liner | Format | Typical Luminance Factor | | Thickness – Applied (in.) | Temperature Resistance – Intermittent °F (°C) | Lens | Color |
|---------|---|-------|------------------|--------------------------|---------|---------------------------|---|-----------|---------------------------|
| | | | | -4 deg. | 45 deg. | | | | |
| 3000X | Micro-cube corner sheeting/ acrylic adhesive/paper liner | Yes | Sheets and Rolls | 1000x | 1500x | 0.020 | 150 (65.5) | Protected | White with linear pattern |
| 7590 | Sealed reflective tape/ low temperature synthetic resin/liner | Yes | Rolls | 200x | 80x | 0.007 | 400 (204) | Protected | Opaque White |
| 7610 | Exposed reflective tape/ synthetic resin/liner | Yes | Rolls | 900x | 700x | 0.004 | 250 (121) | Exposed | Light Gray |
| 7800 | Exposed-lens reflective tape/ synthetic resin/linerless | No | Rolls | 200x | 100x | 0.007 | 500 (260) | Exposed | Medium Gray |

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

Scotch® Tear Strip Tape

Easy access with a simple pull.

For easy opening of packages ranging from overnight envelopes to corrugated fiberboard, the recipient simply grabs and pulls the exposed end of a Scotch® Tear Strip Tape.

- Tensilized polypropylene tears through paper board and light to heavy weight fiber board with high pull-rate success
- Eliminates knives or other sharp edges from opening envelopes and panels
- High pull rate for light to medium weight fiberboard such as CD and book mailers



| Product | Backing Material | Reinforcement | Adhesive Type | Tensile Strength lb/in (N/100mm) | Total Thickness mils (mm) | Adhesion Strength oz/in (N/100mm) | Elongation (%) | Color | Comments |
|-------------------------|------------------|---------------|------------------|----------------------------------|---------------------------|-----------------------------------|----------------|-------|---|
| ASTM Test Method | | | | D-3759 | D-3652 | D-3330 | | | |
| 8624 | Polypropylene | None | Synthetic Rubber | 160 (2802) | 4.5 (0.114) | 65 (71) | 30 | Blue | Medium-strength tear strip for light- to medium-weight fiberboard packaging materials |



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



Glossary

This glossary is compiled by the Pressure Sensitive Tape Council (PSTC) and 3M (terms identified with an asterisk). PSTC is the North American trade association for tape manufacturers and affiliate suppliers, dedicated to helping the industry produce quality pressure sensitive adhesive tape products in the global marketplace. Visit pstc.org for more information.

Abrasion Resistance

The ability of a tape to withstand rubbing and still function satisfactorily.

Acrylic Adhesive*

A pressure sensitive, viscoelastic blend of acrylic-based materials which may be modified by tackifying additives. Acrylic adhesives are a very broad class of materials and come in many types to achieve different properties.

Adhesion to Backing

The bond produced to the backing of the same tape or another tape backing.

Adhesive Deposit or Residue

Adhesive that is pulled away from the tape upon removal and remains on the surface to which it has been applied.

Adjustable Case Sealer

A case sealer that must be manually adjusted for box width and height. Accepts runs of one box size at a time.

Article Letters*

Letters if a MSDS does not exist on a product.

Backing

A relatively thin flexible material to which the adhesive is applied. Theoretically, any material that is reasonably flat, thin and flexible can be used as a tape backing.

Backsize

An occlusive coating applied to the non-pressure sensitive side of a porous backing, such as paper, in order to provide a satisfactory surface that the pressure sensitive adhesive side can contact when the tape is wound into a roll.

Caliper

The thickness (as of a sheet of paper) measured under specified conditions. See also THICKNESS.

Co-extruded*

Refers to film extruded in individual layers with the possibility of different raw materials in each layer providing unique combined film properties.

Conformability*

The ability for a tape to make arcs, circles, go into depressions, go over protrusions and still stay in one piece without slivering or tape lifting or necking down.

Containment

To confine and hold in place.

Controlled Unwind*

When a balance is achieved between too low of an unwind, allowing the tape to prematurely unwind from its own backing, or too high, causing premature slivering or breaking when unwinding from its roll.

Elastomer

An elastic, polymeric substance, such as natural or synthetic rubber.

Elongation (Stretch, Ultimate Elongation)

The distance a tape will stretch in the machine or cross direction before breaking under controlled conditions, expressed as a percentage of original length. Elongation is not necessarily an indication of conformability.

Extruded*

A manufacturing process where material is forced through a nozzle (like extruded film or backing). Better for lay-flat than skived.

FOL

Full overlap.

Filaments

Thin, longitudinal yarns or threads of glass, polyester, nylon or other high strength materials.

Holding Power (Shear Adhesion, Shear Resistance)

The ability of a tape to resist static forces applied in the same plane as the backing. Usually expressed in a time required for a given weight and length of tape to shear free from a vertical panel.

Hot Melt (Pressure Sensitive Adhesive)

A pressure sensitive adhesive, applied to the backing in hot liquid form, which then cools to form a conventional pressure sensitive adhesive.

Humidity

The moisture content of the air. Actual humidity is the number of grams of moisture in the air at any given time. Relative humidity is the percent of moisture relative to the maximum that air at any given temperature can retain without precipitation.

Impact Resistance (Shock Resistance)

The ability of a tape to resist sudden impacts, pulls, or shocks as may sometimes be encountered by packages in transit.

L-Clip

Tape seal applied over the edge of non-RSCs with one leg down the side and the other on the top and/or bottom.

Moisture Vapor Transmission Rate

A measure of the rate of water vapor transmission through a pressure sensitive product usually measured in grams per square meter per 24 hours.

MOPP

Monoaxially-oriented polypropylene tape construction.

NPE*

An NPE number is used to designate an experimental product. NPE products are often provided to customers for evaluation purposes only, and may or may not be commercialized.

Non-RCS

All box structures other than RSC (Regular Slotted Carton).

Off-Core

A roll of tape in which the layers are in correct alignment, but the tape is displaced sideways on the core.

Opacity

The ability of a tape to prevent the transmission of light.

Pad

Pre-cut, tape strips stacked on a pad for easy one-at-a-time removal.

*Compiled by 3M.

Glossary

PE*

The abbreviation for polyethylene. Usually extruded in a single (mono) layer.

Peel Adhesion

The force per unit width required to break the bond between a pressure sensitive adhesive tape and the surface to which it has been applied when the tape is peeled back at a controlled angle at a standard rate and condition.

PLE

Packing List Envelope.

Pouch Tape

Tape with adhesive-free area within a perimeter of pressure sensitive adhesive. When applied the adhesive-free area forms a containment pouch.

PP*

Abbreviation for polypropylene. Usually manufactured as a single (mono) layer via a casting process.

Pressure Sensitive

A term commonly used to designate a distinct category of adhesive tapes and adhesives which in dry form (solvent/water free) are aggressively and permanently tacky at room temperature and that firmly adhere to a variety of dissimilar surfaces upon mere contact without the need of more than finger or hand pressure. These products require no activation by water, solvent, or heat in order to exert a strong adhesive holding force toward such materials as paper, plastic, glass, wood, cement, and metal. They have sufficient cohesive holding power and elastic nature so that, despite their aggressive tackiness, they can be handled with the fingers and removed from smooth surfaces without leaving a residue.

Quick Stick (Finger Tack, Initial Adhesion, Wet Grab)

See TACK.

Random Case Sealer

A case sealer that automatically adjusts for case width and height. Typically used for runs of different box sizes.

Recouperage

To salvage goods within a container that has broken or opened during shipment.

Release Force

The measure of the force required to separate a unit width of pressure sensitive tape from a release coated surface at a controlled angle and speed.

Remote Sensing

The technique or process of obtaining data or images from a distance.

Retroreflective

Surface, material, or device that reflects light back to its source.

RGT

Reinforced Gum Tape.

RSC

Regular Slotted Carton.

Rubber Adhesive*

A pressure sensitive, viscoelastic blend of polymeric rubber-based materials and tackifying resin. The rubber materials may be natural or synthetic. Rubber adhesives are a very broad class of materials and come in many types to achieve different properties.

Shear Adhesion

The time required, under specified test conditions (surface area, weight load), to slide a standard area of pressure sensitive tape from a standard flat surface in a direction parallel to the surface.

Single Faced (Coated)

A tape to which a pressure sensitive adhesive is applied to only one side of the backing.

Solvent/Chemical Resistant*

Ability to resist common solvents or chemicals.

Surface Energy (Surface Wetting Ability)

The measure of surface tension in dynes. The lower the surface energy of a substrate, the more difficult it becomes for an adhesive or coating to wet out that surface.

Tack

The property of a pressure sensitive adhesive that allows it to adhere to a surface under very slight pressure. It is determined by the ability of the adhesive to wet quickly the surface it contacts.

Tear Resistance

The force required to propagate a tear in a tape in a given direction after the tear has been initiated.

Telescoping

A sideways sliding of the tape layers, one over another, such that the roll looks like a funnel or a telescope, usually occurring over a period of time.

Tensile Strength

The force required to break a unit width of tape by controlled pulling on opposite ends of the piece.

Thickness (Caliper, Gauge)

The perpendicular distance from one surface of either a tape, backing or adhesive to the other, usually expressed in mils, thousandths of an inch or millimeters. This is usually measured under controlled slight pressure with a special gauge.

TSCA*

Toxic Substances Control Act.

U-Clip

Tape seal applied to an RSC carton with tape legs down both sides of the carton and across the center seam.

UL 723*

UL 723 deals mainly with flammability.

Unwind or Unwind Adhesion

The force required to remove tape from a roll under prescribed conditions.

Water Vapor Transmission (WVTR)

The weight of water vapor allowed through a controlled area of tape within a specified time period and under controlled conditions.

*Compiled by 3M.



Numerical Index

| | | | | | | | |
|-------------|------------|--------------------|--------|--------------|--------|-------------|----|
| 200a..... | 8 | 864..... | 33 | 7800..... | 43 | H122..... | 16 |
| 200a3..... | 8 | 865..... | 33 | 8000a..... | 9 | H123..... | 16 |
| 302..... | 21 | 880..... | 29, 31 | 8000a3..... | 9 | H128..... | 16 |
| 305..... | 21 | 880MSR..... | 31 | 8000af..... | 9 | H129..... | 16 |
| 311+..... | 21, 22, 24 | 890MSR..... | 29, 31 | 8000af3..... | 9 | H130..... | 16 |
| 313..... | 21 | 890RCT..... | 31 | 8004..... | 27 | H131..... | 16 |
| 315..... | 21 | 893..... | 29, 31 | 8310..... | 37 | H133..... | 16 |
| 351..... | 21 | 894..... | 31 | 8315..... | 37 | H150..... | 16 |
| 353..... | 21 | 896..... | 31 | 8320..... | 37 | H153..... | 16 |
| 355..... | 21 | 897..... | 29, 31 | 8330..... | 37 | H180..... | 16 |
| 355CP..... | 23 | 898..... | 29, 31 | 8340..... | 37 | H183..... | 16 |
| 369..... | 21 | 898MSR..... | 31 | 8346..... | 37 | H190..... | 16 |
| 371..... | 21 | 899..... | 31 | 8346HP..... | 37 | H192..... | 16 |
| 371+..... | 21, 22 | 1072..... | 40 | 8347..... | 37 | H320..... | 16 |
| 371CP..... | 23 | 1074..... | 40 | 8350..... | 37 | HB900..... | 16 |
| 373..... | 21 | 1075..... | 40 | 8381..... | 37 | HB901..... | 16 |
| 373CP..... | 23 | 1076..... | 40 | 8383..... | 37 | HB902..... | 16 |
| 375..... | 21 | 2517..... | 25 | 8393..... | 37 | HB903..... | 16 |
| 375CP..... | 23 | 2519..... | 25 | 8469..... | 39 | HR80..... | 16 |
| 600..... | 27 | 2525..... | 25 | 8469CP..... | 39 | HR83..... | 16 |
| 605..... | 27 | 2526..... | 25 | 8470..... | 39 | HR933..... | 16 |
| 610..... | 27 | 3000X..... | 43 | 8470CP..... | 39 | M82..... | 16 |
| 640..... | 27 | 3071CP..... | 23 | 8622..... | 39 | M96..... | 16 |
| 660..... | 27 | 3073..... | 22 | 8624..... | 44 | M707..... | 16 |
| 681..... | 27 | 3073CP..... | 23 | 8635..... | 40 | M727..... | 16 |
| 690..... | 27 | 3199..... | 25 | 8651..... | 33 | M797..... | 16 |
| 697..... | 38 | 3565..... | 41 | 8884..... | 34 | M900..... | 16 |
| 697CP..... | 38 | 3732..... | 25 | 8886..... | 34 | M920..... | 16 |
| 699..... | 38 | 3750P..... | 39 | 8898..... | 32 | P52..... | 16 |
| 699CP..... | 38 | 3765..... | 41 | 8899HP..... | 29, 32 | P52W..... | 16 |
| 700a-s..... | 8 | 3771..... | 25 | 8915..... | 31 | P56..... | 16 |
| 800ab..... | 9 | 3772..... | 25 | 8916V..... | 31 | P56W..... | 16 |
| 800ab3..... | 9 | 3775..... | 25 | 8919MSR..... | 31 | P400..... | 16 |
| 800asb..... | 9 | 3779..... | 25 | 8934..... | 29, 31 | P448..... | 16 |
| 800r..... | 10 | 5910..... | 27 | 8959..... | 31 | S634..... | 16 |
| 800r3..... | 10 | 6141..... | 25 | 8988..... | 31 | S867..... | 12 |
| 800rf..... | 10 | 6142..... | 25 | a20..... | 8 | S86711..... | 12 |
| 800rf3..... | 10 | 6143..... | 25 | a20-s..... | 8 | W100..... | 16 |
| 800rks..... | 10 | 6144..... | 25 | a80..... | 9 | W200..... | 16 |
| 809G..... | 39 | 6145..... | 25 | a80-3..... | 9 | | |
| 809GP..... | 39 | 6146..... | 25 | a80-t..... | 9 | | |
| 809S..... | 39 | 6147..... | 25 | a80b..... | 9 | | |
| 824RCT..... | 41 | 7000a Pro..... | 8 | a80b-3..... | 9 | | |
| 830RCT..... | 41 | 7000a3 Pro..... | 8 | C22..... | 16 | | |
| 821..... | 41 | 7000r HS Pro..... | 10 | C23..... | 16 | | |
| 822..... | 39 | 7000r Pro..... | 10 | C25..... | 16 | | |
| 856..... | 27, 41 | 7000r3 HS Pro..... | 10 | H10..... | 16 | | |
| 860..... | 29, 32 | 7000r3 Pro..... | 10 | H12..... | 16 | | |
| 862..... | 29, 33 | 7590..... | 43 | H38..... | 16 | | |
| 863..... | 33 | 7610..... | 43 | H121..... | 16 | | |

Product Name Index

3M™ AccuGlide™ Taping Heads

| | |
|-----------|----|
| 2+ | 11 |
| 3 | 11 |
| 4 | 11 |
| HST | 11 |
| LHB | 11 |
| NPH | 11 |

3M-Matic™ Adjustable Case Sealers

| | |
|------------------|---|
| 200a | 8 |
| 200a3 | 8 |
| 7000a Pro | 8 |
| 7000a3 Pro | 8 |
| 700a-s | 8 |
| 8000a | 9 |
| 8000a3 | 9 |
| 8000af | 9 |
| 8000af3 | 9 |
| 800ab | 9 |
| 800ab3 | 9 |
| 800asb | 9 |
| a20 | 8 |
| a20-s | 8 |
| a80 | 9 |
| a80-3 | 9 |
| a80-t | 9 |
| a80b | 9 |
| a80b-3 | 9 |

3M-Matic™ Random Case Sealers

| | |
|---------------------|----|
| 800r | 10 |
| 800r3 | 10 |
| 800rf | 10 |
| 800rf3 | 10 |
| 800rks | 10 |
| 7000r HS Pro | 10 |
| 7000r Pro | 10 |
| 7000r3 HS Pro | 10 |
| 7000r3 Pro | 10 |

Bag Conveying Tape

| | |
|------------|----|
| 8635 | 40 |
|------------|----|

Bag Sealing Tapes

| | |
|--------------|----|
| 8469 | 39 |
| 8469CP | 39 |
| 8470 | 39 |
| 8470CP | 39 |
| 8622 | 39 |

Box Repair Tapes

| | |
|------------|----|
| 2517 | 25 |
| 2519 | 25 |
| 2525 | 25 |
| 2526 | 25 |

Box Sealing Tapes

| | |
|------------|----|
| 311+ | 21 |
| 302 | 21 |
| 305 | 21 |
| 313 | 21 |
| 315 | 21 |
| 351 | 21 |
| 353 | 21 |
| 355 | 21 |
| 369 | 21 |
| 371 | 21 |
| 371+ | 21 |
| 373 | 21 |
| 375 | 21 |

Carry Handles

| | |
|--------------|----|
| 8310 | 37 |
| 8315 | 37 |
| 8320 | 37 |
| 8330 | 37 |
| 8340 | 37 |
| 8346 | 37 |
| 8346HP | 37 |
| 8347 | 37 |
| 8350 | 37 |
| 8381 | 37 |
| 8383 | 37 |
| 8393 | 37 |

Cold Temperature Tape

| | |
|------------|----|
| 311+ | 24 |
|------------|----|

Custom Printed Box Sealing Tapes

| | |
|--------------|----|
| 355CP | 23 |
| 371CP | 23 |
| 373CP | 23 |
| 375CP | 23 |
| 3071CP | 23 |
| 3073CP | 23 |

Fingerprint Lifting Tape

| | |
|------------|----|
| 8004 | 27 |
|------------|----|

Hang Tabs

| | |
|------------|----|
| 1072 | 40 |
| 1074 | 40 |
| 1075 | 40 |
| 1076 | 40 |

High Strength Filament Tapes

| | |
|---------------|--------|
| 860 | 29 |
| 862 | 29 |
| 880 | 29, 31 |
| 880MSR | 31 |
| 890MSR | 29, 31 |
| 890RCT | 31 |
| 893 | 29, 31 |
| 894 | 31 |
| 896 | 31 |
| 897 | 29, 31 |
| 898 | 29, 31 |
| 898MSR | 31 |
| 899 | 31 |
| 8899HP | 29 |
| 8915 | 31 |
| 8934 | 29, 31 |
| 8959 | 31 |
| 8988 | 31 |
| 8916V | 31 |
| 8919MSR | 31 |

Label Protection Tapes

| | |
|------------|----|
| 821 | 41 |
| 856 | 41 |
| 3565 | 41 |
| 3765 | 41 |

Light Duty Packaging Tapes

| | |
|------------|----|
| 600 | 27 |
| 605 | 27 |
| 610 | 27 |
| 640 | 27 |
| 660 | 27 |
| 681 | 27 |
| 690 | 27 |
| 856 | 27 |
| 5910 | 27 |



Product Name Index

Manual Tape Dispensers

| | |
|-------|----|
| C22 | 16 |
| C23 | 16 |
| C25 | 16 |
| H10 | 16 |
| H12 | 16 |
| H38 | 16 |
| H121 | 16 |
| H122 | 16 |
| H123 | 16 |
| H128 | 16 |
| H129 | 16 |
| H130 | 16 |
| H131 | 16 |
| H133 | 16 |
| H150 | 16 |
| H153 | 16 |
| H180 | 16 |
| H183 | 16 |
| H190 | 16 |
| H192 | 16 |
| H320 | 16 |
| HB900 | 16 |
| HB901 | 16 |
| HB902 | 16 |
| HB903 | 16 |
| HR80 | 16 |
| HR83 | 16 |
| HR933 | 16 |
| M82 | 16 |
| M96 | 16 |
| M707 | 16 |
| M727 | 16 |
| M797 | 16 |
| M900 | 16 |
| M920 | 16 |
| P52 | 16 |
| P52W | 16 |
| P56 | 16 |
| P56W | 16 |
| P400 | 16 |
| P448 | 16 |
| S634 | 16 |
| W100 | 16 |
| W200 | 16 |

Multipack Tapes

| | |
|-------|----|
| 697 | 38 |
| 697CP | 38 |
| 699 | 38 |
| 699CP | 38 |

Non-RSC Closure Solutions

| | |
|--------|----|
| S867 | 12 |
| S867II | 12 |

Packing List Envelopes

| | |
|--------|----|
| F1 | 43 |
| FED1 | 43 |
| NP1 | 43 |
| NP2 | 43 |
| NP3 | 43 |
| NP4 | 43 |
| NP5 | 43 |
| NP6 | 43 |
| NP9 | 43 |
| NPZ-L | 43 |
| NPZ-XL | 43 |
| T1 | 43 |
| T1 INV | 43 |
| T1 PL | 43 |
| T2 | 43 |
| T3 | 43 |
| T4 | 43 |

Pouch Tapes

| | |
|--------|----|
| 824RCT | 41 |
| 830RCT | 41 |

Recycled Corrugate Tapes

| | |
|------|----|
| 311+ | 22 |
| 371+ | 22 |
| 3073 | 22 |

Reinforced Strapping Tapes

| | |
|------|--------|
| 862 | 29, 33 |
| 863 | 33 |
| 864 | 33 |
| 865 | 33 |
| 8651 | 33 |

Remote Sensing Tapes

| | |
|-------|----|
| 3000X | 43 |
| 7590 | 43 |
| 7610 | 43 |
| 7800 | 43 |

Security Tapes

| | |
|------|----|
| 3199 | 25 |
| 3732 | 25 |
| 3771 | 25 |
| 3772 | 25 |
| 3775 | 25 |
| 3779 | 25 |

Stretchable Tapes

| | |
|------|----|
| 8884 | 34 |
| 8886 | 34 |

Tape Pads

| | |
|-------|----|
| 809G | 39 |
| 809GP | 39 |
| 809S | 39 |
| 822 | 39 |
| 3750P | 39 |

Tear Strip Tape

| | |
|------|----|
| 8624 | 44 |
|------|----|

Tensitized Polypropylene Tapes

| | |
|--------|--------|
| 860 | 29, 32 |
| 8898 | 32 |
| 8899HP | 29, 32 |

Water Activated Tapes

| | |
|------|----|
| 6141 | 25 |
| 6142 | 25 |
| 6143 | 25 |
| 6144 | 25 |
| 6145 | 25 |
| 6146 | 25 |
| 6147 | 25 |

We're here to help.

Need help finding the right product for your packaging needs? Contact us if you need product, technical or application advice or want to collaborate with a 3M technical specialist, or give us a call at 1-800-831-0658.

3M Custom Packaging Hotline: 1-800-253-2329

3M Industrial Technical Support: 1-888-726-8244

3M-Matic™ Application Support Helpline: 1-800-328-1390

3M-Matic™ and Tape Dispenser Replacement Parts: 1-800-344-9883

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

3M, 3M-Matic, AccuGlide, Scotchlite and Tartan are trademarks of 3M Company. Scotch is a registered trademark of 3M Company.



Closure and Masking Systems Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000

Phone 800-362-3550
Fax 877-369-2923
Web 3M.com/Packaging

Please recycle. Printed in USA.
© 3M 2019. All rights reserved.
70-0710-0432-2 Rev Apr 2019