Repositionable Tapes

665 • 666 • 9415PC • 9416 • 9425 • 9425HT • 9449S

Technical Data **January, 2011**

Product Description

3M™ Repositionable Tapes are double coated tapes that are ideal for applications where one or both parts need to be repositioned or removed easily.

Construction

Product	3M™ Repositionable Tape 665	3M™ Repositionable Tape 666	3M™ Repositionable Tape 9415PC	3M™ Repositionable Tape 9416	3M™ Repositionable Tape 9425	3M™ Repositionable Tape 9425HT	3M™ Repositionable Tape 9449S
Adhesive Type:							
Faceside[1]	400	1070	400	400	420	420	1000
Backside[2]	1070	400	1000	1000	1050	1050	—
Carrier:	0.0014 in. (0.036 mm) UPVC	0.0014 in. (0.036 mm) UPVC	0.001 in. (0.025 mm) Clear Polyester	Tissue	0.0014 in. (0.036 mm) UPVC	0.001 in. (0.025 mm) Clear Polyester	None
Release Liner:	None	White Polyethylene	70# White Polycoated Kraft	70# White Polycoated Kraft	58# Natural Polycoated Kraft	58# Natural Polycoated Kraft	55# Densified Kraft Paper
Thickness:							
Tape	0.0035 in. (0.089 mm)	0.0035 in. (0.089 mm)	0.002 in. (0.050 mm)	0.002 in. (0.050 mm)	0.0058 in. (0.15 mm)	0.0054 in. (0.13 mm)	0.0004 in. (0.01 mm)
Liner	—	0.003 in. (0.076 mm)	0.0056 in. (0.14 mm)	0.0056 in. (0.14 mm)	0.0042 in. (0.10 mm)	0.0042 in. (0.10 mm)	0.0025 in. (0.063 mm)
Tape Color:	Clear	Clear	Translucent	White	Clear	Clear	Translucent

Note 1: Faceside adhesive is on the interior of the roll, exposed when unwound.

Note 2: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

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Typical Physical Properties

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

Product	3M™ Repositionable Tape 665	3M™ Repositionable Tape 666	3M™ Repositionable Tape 9415PC	3M™ Repositionable Tape 9416	3M™ Repositionable Tape 9425	3M™ Repositionable Tape 9425HT	3M™ Repositionable Tape 9449S
Adhesion to Steel: (ASTM D3330, 180° peel modified, 72 hour dwell)							
Faceside	25 oz./in. (27 N/100 mm)	23 oz./in. (25 N/100 mm)	50 oz./in. (54 N/100 mm)	50 oz./in. (54 N/100 mm)	45 oz./in. (49 N/100 mm)	45 oz./in. (49 N/100 mm)	5 oz./in.* (9 N/100 mm)
Backside	23 oz./in. (25 N/100 mm)	25 oz./in. (27 N/100 mm)	3 oz./in. (5.4 N/100 mm)	3 oz./in. (5.4 N/100 mm)	12 oz./in. (13 N/100 mm)	12 oz./in. (13 N/100 mm)	—
Relative High Temperature Operating Ranges:	125°F (52°C)	125°F (52°C)	158°F (70°C)	158°F (70°C)	125°F (52°C)	250°F (121°C)	158°F (70°C)
Relative Solvent Resistance:	Good	Good	Fair	Fair	Good	Good	Fair
U.V. Resistance:	Excellent	Excellent	Good	Good	Excellent	Excellent	Good

*3M tape 9449 tested with 90 degree peel using 2 mil polyester backing.

Available Sizes

Product	3M tape 665	3M tape 666	3M tape 9415PC	3M tape 9416	3M tape 9425	3M tape 9425HT	3M tape 9449S
Available Lengths (Subject to Minimum Order Requirements):							
Standard	72 yds. (65.8 m)	72 yds. (65.8 m)	72 yds. (65.8 m)	72 yds. (65.8 m)	72 yds. (65.8 m)	72 yds. (65.8 m)	72 yds. (65.8 m)
Maximum In:							
1/4" to 5/16" widths	108 yds. (98.8 m)	72 yds. (65.8 m)	144 yds. (132 m)	144 yds. (132 m)	72 yds. (65.8 m)	72 yds. (65.8 m)	144 yds. (132 m)
3/8" to 7/16" widths	288 yds. (263 m)	108 yds. (98.8 m)	144 yds. (132 m)	144 yds. (132 m)	144 yds. (132 m)	144 yds. (132 m)	144 yds. (132 m)
1/2" to 3" widths	288 yds. (263 m)	108 yds.** (98.8 m)	432 yds. (395 m)	360 yds. (329 m)	450 yds. (411 m)	288 yds. (263 m)	360 yds. (329 m)
Greater than 3"	288 yds. (263 m)	108 yds. (98.8 m)	432 yds. (395 m)	360 yds. (329 m)	288 yds. (263 m)	288 yds. (263 m)	360 yds. (329 m)
Available Widths (Subject to Minimum Order Requirements):							
Minimum	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)	1/4 in. (25.4 mm)
Maximum	46 in. (1168 mm)	46 in. (1168 mm)	47 in. (1194 mm)	47 in. (1194 mm)	48 in. (1219 mm)	48 in. (1219 mm)	48 in. (1219 mm)
Normal Slitting Tolerance:	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)
Core Size (ID):	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)

**Liner of 3M tape 666 will be skip slit within these width limits unless otherwise noted in the special instruction section of your order.

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Features

- 3M™ Repositionable Tapes 665 and 666 have a medium tack adhesive on both sides of the tape.
  - Good adhesive anchorage to the film carrier provides one-piece tape removal from many surfaces.
  - Slight side-to-side adhesion differential, therefore specific side removal can be accomplished if applied properly.
  - The higher tack side of 3M tape 665 is on the face side (interior of roll).
  - The higher tack side of 3M tape 666 is on the linered or back side (exterior of roll).
  - The linerless feature of 3M tape 665 can help simplify manual or automatic dispensing. No special liner removal equipment is required.
  - The complete plastic construction of both tapes provides a hot wire cuttable feature for plastic packaging.

- 3M™ Repositionable Tapes 9415PC and 9416 have a low tack adhesive on the back side (exterior of roll) and a high tack ("permanent") adhesive on the face side (interior of roll). This means liner covers the low tack adhesive and the high tack adhesive is exposed when the tape is unwound.
  - The low tack adhesive side allows for removal from many films, foils, and papers and will not cause delamination from most paper stock. In many cases this side can be reused numerous times. The user should perform specific tests to determine the product's suitability for the particular application.
  - Flexible materials will adhere better to the low tack adhesive than will rigid materials (e.g. paper vs. cardboard). It may also be necessary to remove curl from certain materials to avoid material separation from the tape over time.
  - 3M™ Repositionable Tape 928 is identical to 3M tape 9416 for the hand-held ATG applicator.

- 3M™ Repositionable Tapes 9425 and 9425HT have a medium tack adhesive on the back side (exterior of roll) and a high tack ("permanent") adhesive on the face side (interior of roll) of the tape. This means liner covers the medium tack adhesive and the high tack adhesive is exposed when the tape is unwound.
  - The medium-tack adhesive allows removal from many foils and films without adhesive residue. In many cases, the tape can be reused numerous times. The user should perform specific tests to determine the product's suitability for the particular application.
  - The moisture stable liner improves processing of parts and ease of liner removal.
  - The polyester film carrier of 3M tape 9425HT provides dimensional stability, improved handling for die cutting and laminating, as well as providing higher temperature resistance.

- 3M™ Repositionable Tape 9449S is a single linered low tack laminating adhesive.
  - The liner is non-siliconized on the back side (adhesive side) which allows for the construction of custom labels that are easier to handle, consistently maintaining registration on-press when printing and converting.
  - The low tack allows easy removal of labels from substrates with little or no adhesive residue.

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Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improve bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*

***Note:** Carefully read and follow the manufacturer's precautions and directions for use when using solvents.

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory. An exception is 3M™ Repositionable Tapes 9425 and 9425HT which can be applied at temperatures as low as 32°F (0°C).

Application Ideas

- Reclosable bags or envelopes.
- Core starting and end tabbing of papers, foils, and films.
- Removable stickers and labels.
- Point of purchase displays.
- Book inserts.
- Mounting promotional items.
- Removable/changeable advertisements.
- Temporary hold for protective packaging material, such as foam or cardboard, used during shipment of manufactured goods.
- Removable/changeable foam gasketing.

Storage

Store in original cartons at 70°F (21°C) and 50% relative humidity.

Shelf Life

If stored under proper conditions, these products retain their performance and properties for two years from date of manufacture.

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Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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ISO 9001:2008

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Printed in U.S.A.
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