



Extended Liner Tapes

450EK • 450XL • 465XL • 466XL • 476XL
920XL • 921XL • 922XL • 9925XL

Technical Data

July, 2003

Product Description 3M™ Extended Liner Tapes have a liner that extends beyond the width of the adhesive to provide easy liner starting and removal. The liners, with the exception of 3M™ Extended Liner Tapes 922XL and 450EK are printed with the message, “Remove to Expose Adhesive”.

Features

- The extended liner provides a dry edge on each side of the tape for easy liner removal. Stated product widths include the dry edge of the liner.
- 3M™ Extended Liner Tapes 465XL, 920XL and 9925XL are ideal for adhesion to paper materials but also work well on many other surfaces. Some application ideas are:
 - Pressure-sensitive edges for posters and point of purchase sales advertising.
 - Permanent mounting of novelty items, note pads, literature, posters and labels.
 - Pressure-sensitive edging on business forms.
- 3M™ Extended Liner Tape 921XL is ideal for mounting and joining materials where repositionability may be desired.
- 3M tape 922XL is ideal for joining a wide variety of similar and dissimilar materials where high shear strength and high temperature performance are required.
- 3M™ Extended Liner Tapes 450EK, 450XL, 465XL and 920XL are ideal for pharmaceutical outsert attachment. 3M tape 450XL has a heavier liner than 3M tape 920XL to help reduce liner breakage during application. 3M tape 450EK has the most tear resistant liner of these products. This release liner has stretch built into the paper making it tough and tear resistant. 3M tape 465XL is .002 in. thick for surfaces which require more adhesive mass.
- 3M™ Extended Liner Tape 476XL is a double coated tape with a film carrier and has excellent quick stick for sealing many boxes and tubes used for various types of shipments. 3M tape 9925XL is a double coated tape with a thin tissue carrier for permanent paper to paper bonding.
- 3M™ Extended Liner Tape 466XL is well suited to many coated, uncoated and synthetic paper applications as well as for high and low surface energy plastic film applications.

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Construction

Products	3M™ Extended Liner Tape 450EK	3M™ Extended Liner Tape 450XL	3M™ Extended Liner Tape 465XL	3M™ Extended Liner Tape 466XL	3M™ Extended Liner Tape 476XL	3M™ Extended Liner Tape 920XL	3M™ Extended Liner Tape 921XL	3M™ Extended Liner Tape 922XL	3M™ Extended Liner Tape 9925XL
Adhesive Type:*	400 Acrylic	400 Acrylic	400 Acrylic	340 Acrylic	760 Rubber	400 Acrylic	1000	350 Acrylic	770 Rubber
Adhesive Carrier:	None	None	None	None	Polypropylene film	None	None	None	Tissue
Release Liner:	70# White Extensible Kraft	60# Kraft Glassine-Tan Green Printing	60# Densified Kraft Tan Paper Green Printing	62# Densified Kraft Off-White Paper Black Printing	43# Densified Kraft White Paper Red Printing	43# Densified Kraft White Paper Red Printing	43# Densified Kraft White Paper Blue Printing	60# Densified Kraft Tan Paper	43# Densified Kraft White Paper Black Printing
Approximate Thickness: Release Liner	0.0056 in. (0.146 mm)	0.0035 in. (0.09 mm)	0.0035 in. (0.09 mm)	0.004 in. (0.11 mm)	0.003 in. (0.08 mm)	0.0025 in. (0.065 mm)	0.0025 in. (0.065 mm)	0.0035 in. (0.09 mm)	0.002 in. (0.05 mm)
Tape Only	0.001 in. (0.025 mm) Adhesive Transfer Tape	0.001 in. (0.025 mm) Adhesive Transfer Tape	0.002 in. (0.05 mm) Adhesive Transfer Tape	0.002 in. (0.05 mm) Adhesive Transfer Tape	0.006 in. (0.16 mm) Double Coated Film Tape	0.001 in. (0.025 mm) Adhesive Transfer Tape	0.001 in. (0.025 mm) Adhesive Transfer Tape	0.002 in. (0.05 mm) Adhesive Transfer Tape	0.0025 in. (0.065 mm) Tissue Reinforced Double Coated Tape
Tape Color:	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Off-White Translucent

* 3M™ Adhesive 340 is a medium firm acrylic pressure-sensitive adhesive system. It features very high tack to a variety of surfaces.

3M™ Adhesive 350 is a firm acrylic pressure-sensitive adhesive system. It features very high adhesion to a variety of surfaces, excellent shear holding power, high temperature resistance and excellent UV resistance.

3M™ Adhesive 400 is a medium-firm acrylic pressure-sensitive adhesive system. It features high initial adhesion to a wide variety of materials and good shear holding power.

3M™ Adhesive 1000 is a soft pressure-sensitive adhesive system. It features low initial adhesion to paper and many other materials with minimal bond build-up.

3M™ Adhesive 760 is a high tack synthetic rubber adhesive. It provides excellent quick stick or initial adhesion.

3M™ Adhesive 770 is a soft rubber-resin pressure sensitive adhesive system. It features high initial adhesion to a wide variety of materials.

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Typical Physical Properties and Performance Characteristics **Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

Products	3M™ Extended Liner Tape 450EK	3M™ Extended Liner Tape 450XL	3M™ Extended Liner Tape 465XL	3M™ Extended Liner Tape 466XL	3M™ Extended Liner Tape 476XL	3M™ Extended Liner Tape 920XL	3M™ Extended Liner Tape 921XL	3M™ Extended Liner Tape 922XL	3M™ Extended Liner Tape 9925XL
Adhesion to Steel: (ASTM D3330)	20 oz./in. (22 N/100 mm)	20 oz./in. (22 N/100 mm)	25 oz./in. (27 N/100 mm)	44 oz./in. (48 N/100 mm)	130 oz./in. (141 N/100 mm)	20 oz./in. (22 N/100 mm)	20 oz./in. (11 N/100 mm)	70 oz./in. (76 N/100 mm)	60 oz./in. (66 N/100 mm)
Relative High Temperature Operating Ranges: Long Term (days, weeks)	180°F (82°C)	180°F (82°C)	180°F (82°C)	180°F (82°C)	120°F (50°C)	180°F (82°C)	150°F (65°C)	300°F (149°C)	100°F (41°C)
Short Term (minutes, hours)	250°F (121°C)	250°F (121°C)	250°F (121°C)	250°F (121°C)	150°F (65°C)	250°F (121°C)	200°F (93°C)	450°F (232°C)	150°F (65°C)
Relative Solvent Resistance:	Medium/High	Medium/High	Medium/High	Medium	Medium/Low	Medium/High	Low	Very High	Low
U.V. Resistance:	Excellent	Excellent	Excellent	Fair	Not recommended for direct exposure to sunlight or other sources of ultra violet light.	Excellent	Excellent	Not recommended for direct exposure to sunlight or other sources of ultra violet light.	Not recommended for direct exposure to sunlight or other sources of ultra violet light.
Shelf Life of Tape in Roll Form:	24 months	24 months	24 months	24 months	18 months	24 months	18 months	24 months	18 months
			from date of manufacture	when stored in original cartons at 70°F (21°C) and 50% relative humidity.					

Available Sizes

Available Lengths (Subject to Minimum Order Requirements): Minimum	—	—	60 yds. (55 m)	500 yds. (457 m)	60 yds. (55 m)	1000 yds. (914 m)	1000 yds. ⁽¹⁾ (914 m)	60 yds. (55 m)	750 yds. (685 m)
Maximum	600 yds. (548 m)	750 yds. (685 m)	600 yds. (548 m)	1000 yds. (914 m)	540 yds. (494 m)	1000 yds. (914 m)	1000 yds. ⁽¹⁾ (914 m)	600 yds. (548 m)	750 yds. (685 m)
Available Widths (Subject to Minimum Order Requirements): NOTE: Liner Widths Shown	1 in. (25.4 mm) only	1 in. (25.4 mm) only	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm) only	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm) only	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm), 1.5 in. (38 mm), 1.8 in. (47 mm)	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm) only	1/2 in. (12.7 mm) only	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm) only	1/2 in. (12.7 mm), 3/4 in. (19.1 mm), 1 in. (25.4 mm) only
Liner Extension Width: (each side)	3/32 in. (2.4 mm)	3/32 in. (2.4 mm)	3/32 in. (2.4 mm)	1/16 in. (1.6 mm)	1/8 in. (3.2 mm)	3/32 in. (2.4 mm)	1/16 in. (1.6 mm)	3/32 in. (2.4 mm)	1/16 in. (1.6 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)	+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)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)

⁽¹⁾Reverse wound

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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 and heptane. **Note:** Be sure to follow manufacturer's safety 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.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/adhesives. Address correspondence to: 3M Industrial Adhesives and Tapes Division, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144-1000. Our fax number is 651-778-4244. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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ISO 9002

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