

# 3M™ Electronic Double Sided Tapes

## 82600 • 82601 • 82603 • 82605 • 82610 • 82620

### Product Description

3M™ Electronic Double Sided Tapes 82600, 82601, 82603, 82605, 82610 and 82620 have high tack acrylic adhesive on both sides of a thin polyester film. The high tack adhesive provides high initial adhesion and good shear holding power to a variety of substrates.

### Features and Benefits

- Our standard adhesive provides high initial adhesion and good shear holding power to a variety of surfaces.
- The film carrier adds dimensional stability to foams and other substrates making it easier to handle during slitting and die cutting.

### Product Construction

Product Number	Faceside <sup>1</sup> Adhesive Type Thickness	Carrier Type Thickness	Backside <sup>2</sup> Adhesive Type Thickness	Faceside Liner Color, Print Type, Thickness	Backside Liner Color, Print Type, Thickness	Total Tape Thickness without Liner
3M™ Electronic Double Sided Tape 82600	Standard Acrylic 0.002 mm (0.08 mil)	Clear Polyester 0.001 mm (0.04 mil)	Standard Acrylic 0.002 mm (0.08 mil)	Clear Polyester 0.023 mm (0.91 mil)	Clear Polyester 0.050 mm (1.97 mil)	0.005 mm (0.20 mil)
3M™ Electronic Double Sided Tape 82601	Standard Acrylic 0.0035 mm (0.14 mil)	Clear Polyester 0.003 mm (0.12 mil)	Standard Acrylic 0.0035 mm (0.14 mil)	Clear Polyester 0.023 mm (0.91 mil)	Clear Polyester 0.050 mm (1.97 mil)	0.01 mm (0.40 mil)
3M™ Electronic Double Sided Tape 82603	Standard Acrylic 0.012 mm (0.48 mil)	Clear Polyester 0.006 mm (0.24 mil)	Standard Acrylic 0.012 mm (0.48 mil)	Clear Polyester 0.050 mm (1.97 mil)	Clear Polyester 0.035 mm (1.38 mil)	0.03 mm (1.20 mil)
3M™ Electronic Double Sided Tape 82605	Standard Acrylic 0.019 mm (0.75 mil)	Clear Polyester 0.012 mm (0.5 mil)	Standard Acrylic 0.019 mm (0.75 mil)		White, 3M Electronics Polycoated Kraft 0.133 mm (5.2 mil)	0.05 mm (2 mil)
3M™ Electronic Double Sided Tape 82610	Standard Acrylic 0.044 mm (1.75 mil)	Clear Polyester 0.012 mm (0.5 mil)	Standard Acrylic 0.044 mm (1.75 mil)		White, 3M Electronics Polycoated Kraft 0.133 mm (5.2 mil)	0.10 mm (4 mil)
3M™ Electronic Double Sided Tape 82620	Standard Acrylic 0.095 mm (3.75 mil)	Clear Polyester 0.012 mm (0.5 mil)	Standard Acrylic 0.095 mm (3.75 mil)		White, 3M Electronics Polycoated Kraft 0.133 mm (5.2 mil)	0.20 mm (8 mil)

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

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

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## Application Ideas

- General use for applications in the electronics industry in need of excellent initial tack, good adhesion and easy die-cuttability
- Mobile or table lens attachment
- Foam attachment or lamination
- Graphite attachment or lamination
- Antenna bonding

## 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.

Product Number	3M™ Electronic Double Sided Tape 82600				3M™ Electronic Double Sided Tape 82601				3M™ Electronic Double Sided Tape 82603			
Adhesive	Standard Acrylic				Standard Acrylic				Standard Acrylic			
Tape Thickness	0.005 mm				0.01 mm				0.03 mm			
Breakdown Voltage	2600 volts				3000 volts				3000 volts			
Dielectric Strength	13000 volts/mil				7500 volts/mil				2500 volts/mil			
Adhesion 20 min dwell @ RT Tested in accordance with a modified ASTM D-3330 180 degree peel 1 mil PET backing	<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>		<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>		<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>	
	SS	28	3.1	0.8	SS	40	4.4	1.1	SS	60	6.6	1.7
	PC	28	3.1	0.8	PC	40	4.4	1.1	PC	50	5.5	1.4
	ABS	28	3.1	0.8	ABS	31	3.4	0.9	ABS	45	4.9	1.3
	PP	15	1.6	0.4	PP	21	2.3	0.6	PP	40	4.4	1.1
	Glass	25	2.7	0.7	Glass	35	3.8	1.0	Glass	50	5.5	1.4
Adhesion 72 hr dwell @ RT Tested in accordance with a modified ASTM D-3330 180 degree peel 1 mil PET backing	<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>		<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>		<u>oz/in</u>	<u>N/cm</u>	<u>kg/25.4mm</u>	
	SS	35	3.8	1.0	SS	46	5.0	1.3	SS	60	6.6	1.7
	PC	32	3.5	0.9	PC	42	4.6	1.2	PC	60	6.6	1.7
	ABS	32	3.5	0.9	ABS	32	3.5	0.9	ABS	55	6.0	1.6
	PP	18	2.0	0.5	PP	25	2.7	0.7	PP	40	4.4	1.1
	Glass	32	3.5	0.9	Glass	39	4.3	1.1	Glass	60	6.6	1.7
Shear Strength at RT Tested in accordance with a modified ASTM D-3654 1000 grams	>10,000 Minutes				>10,000 Minutes				>10,000 Minutes			
Shear Strength at 70°C (158°F) Tested in accordance with a modified ASTM D-3654 500 grams	>10,000 Minutes				>10,000 Minutes				>10,000 Minutes			
Temperature Resistance: Long Term (days, weeks): Short Term (minutes, hours):	Long term: 120°C (250°F) Short term: 149°C (302°F)				Long term: 120°C (250°F) Short term: 149°C (302°F)				Long term: 120°C (250°F) Short term: 149°C (302°F)			
Humidity Resistance:	High humidity has minimal effect on adhesive performance.											
Resistance:	When parts are properly applied together the adhesive will not be adversely affected by outdoor exposure.											

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## Typical Physical Properties and Performance Characteristics (continued)

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

Product Number	3M™ Electronic Double Sided Tape 82605	3M™ Electronic Double Sided Tape 82606	3M™ Electronic Double Sided Tape 8262-																																																																								
Adhesive	Standard Acrylic	Standard Acrylic	Standard Acrylic																																																																								
Tape Thickness	0.05 mm	0.10 mm	0.20 mm																																																																								
Breakdown Voltage	4000 volts	4600 volts	6000 volts																																																																								
Dielectric Strength	2000 volts/mil	1200 volts/mil	750 volts/mil																																																																								
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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 21°C to 38°C (70°F to 100°F). Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

## Environmental Performance

**Humidity Resistance:** High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for seven days at 32°C (90°F) and 90% relative humidity.

**UV Resistance:** When properly applied, nameplates and decorative trim parts are not adversely affected by exposure to direct sunlight.

**Water Resistance:** Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

**Temperature Cycling Resistance:** High bond strength is maintained after cycling four times through:

- 4 hours at 70°C (158°F)
- 4 hours at -29°C (-20°F)
- 4 hours at 22°C (73°F)

**Chemical Resistance:** When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

## Storage and Shelf Life

The shelf life of 3M™ Electronic Double Sided Tapes 82600, 82601, 82603, 82605, 82610 and 82620 is 24 months from the date of manufacture when stored in the original packaging materials at 16°C to 27°C (60° to 80°F) and 40 to 60% relative humidity.

