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Technical Data | August 2017

3M™ High Shear Pressure Sensitive Cover Tape 2668

Product description

3M™ High Shear Pressure Sensitive Cover Tape 2668 is a transparent, conductive polyester lm tape with a synthetic, room temperature, pressure sensitive adhesive (PSA) zone along each edge. 3M cover tape 2668 is designed to seal electrical and electronic components into 3M's family of polycarbonate carriers. It also works well with certain other embossed carrier tapes.

Construction

Backing	Adhesive	Inner face
Transparent polyester film	Pressure-sensitive, synthetic polymer	Transparent, conductive, polyester film

Available widths

3M cover tape 2668 is available in the standard sizes listed below, with adhesive exposed only along the edges. All 3M cover tape 2668 is supplied in 300 meter, splice-free rolls.

Standard sizes	Widths (mm)						
Carrier tape	8	12	16	24	32	44	56
Cover tape	5.4	9.3	13.3	21.3	25.5	37.4	49.4
Adhesive exposure each edge*	0.7	0.7/0.8/1.1	1.0	1.0/1.3	1.0/1.3/1.4	1.0/1.4	1.0/1.4
Roll length (m) **	300	300	300	300	300	300	300

* Other cover tape and adhesive exposure widths may be available, please consult your 3M representative for information.

** Roll length in 500 meter is also available.

Standard packaging format

3M cover tape 2668 is provided on a plastic core, packaged with high density paper wafer inserts and a centering core in a single polyethylene bag and is placed between two end-caps with corrugated pads in a cardboard carton.

Initial adhesion and aging data

3M cover tape 2668 has a simple process window. Desirable initial peel force values can be achieved with the application of adequate pressure to the non-adhesive surface of the cover tape over the adhesive stripes with a reciprocating shoe, or compliant roller mechanism. The charts on the following page depict the typical room temperature and aging characteristics of 3M cover tape 2668 after sealing to 3M™ Polycarbonate Carrier 3000 and 3M™ Clear Polycarbonate Carrier 2703.

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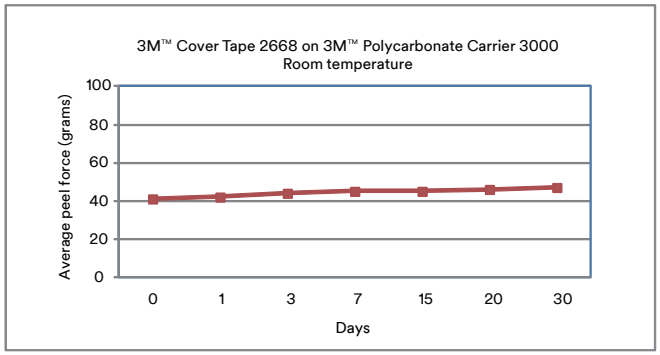
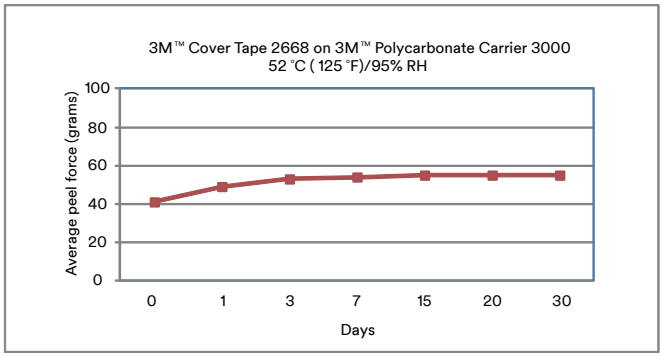
Typical removal force results

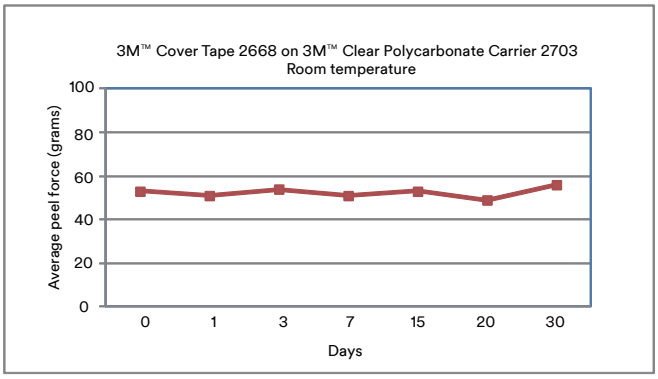
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

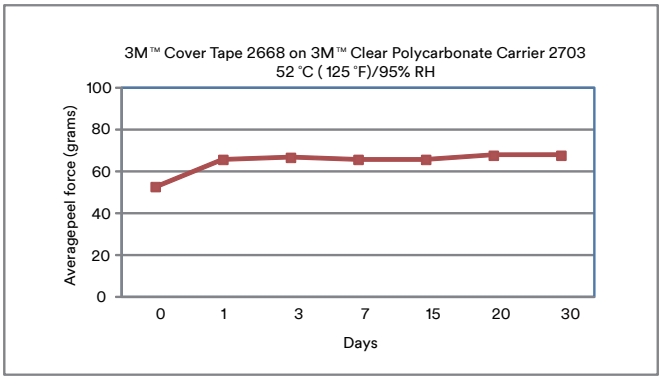




Sealing parameters

Cover tape:	3M™ Pressure Sensitive Cover Tape 2668, 5.4 mm
Carrier tape:	3M™ Polycarbonate Carrier 3000, 8 mm
Sealing mode:	Reciprocating
Pressure:	1.0 bar
Speed/ Dwell time:	100 ms
Temperature:	Room temperature ≈ 23°C (73°F)





Sealing Parameters

Cover tape:	3M cover tape 2668, 5.4 mm
Carrier tape:	3M™ Clear Polycarbonate Carrier 2703, 8 mm
Sealing mode:	Reciprocating
Pressure:	1.0 bar
Speed/ Dwell time:	100 ms
Temperature:	Room temperature ≈ 23°C (73°F)

Graph notes

Notes: The graphs in this document represent sealing performance attained under the conditions specifically stated in the sealing parameters section of the charts. Pressure is the indicated gauge pressure used to achieve the seals, and may vary among sealing equipment manufacturers. The use of a different sealing mechanism, i.e., reciprocating vs. roller, may have an effect upon the performance obtained under otherwise identical conditions due to differences in pressure or pressure distribution. The use of heat is specifically not recommended.

All data presented are representative of peeling studies conducted according to the requirements of the current ANSI/EIA481-E Standard. Sealed samples used in these studies were stored under the conditions noted, wound on 180 mm diameter reels to simulate typical production use. Samples being tested at elevated temperature and humidity were permitted a minimum equilibration period of four hours at room temperature prior to testing to simulate actual use conditions.

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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. Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is provided once the product is approved by 3M for general commercialization and development work is completed.

Description		Units	Typical performance	Test notes	Test method
Material properties	Backing type		Polyester		
	Adhesive type		PSA		
	Sealing temp		Room ambient	1	
Physical properties	Tensile strength	N/mm Width	7.0	2	Modified ASTM-D3759
	Elongation	%	90	2	Modified ASTM-D3759
	Haze	%	5.7	3	ASTM-D1003
	Clarity	%	91.7	3	ASTM-D1003
	Transmission	%	74.9	3	ASTM-D1003
	Thickness	mm (in)	0.061 (0.0024)	2	Modified ASTM-D3652
	Shear strength @ 50°C	minutes	>100	4	Modified ASTM-D3654
	Shear strength @ 40°C	minutes	>1,000	4	Modified ASTM-D3654
	Shear strength @ 23°C	minutes	>4,000	4	Modified ASTM-D3654
Electrical properties	Resistivity (Back side)	Ohms/sq	Non-Conductive	5	ASTM-D257
	Resistivity (Component side)	Ohms/sq	10^5	5	ASTM-D257
Product format	Core type	Material	Plastic		
	Core inner diameter	mm (in)	76.45 (3.0)		
	Roll diameter	mm (in)	183 (7.2)		
	Roll length	m (yd)	300 (328)		

Test notes

1. The application of heat to seal PSA cover tapes is specifically not recommended. Pressure in the range of 10 to 50 psig is sufficient to seal PSA adhesives.
2. Tensile tests and thickness measurement are conducted at 21°C (70°F), 70% RH, in the machine direction of the polyester film.
3. Optical properties are measured using the BYK-Gardner Haze-Gard Plus Transmission Meter.
4. 0.5” x 0.5” adhesive secured to polycarbonate substrate with 1,000 gm load.
5. Resistivity is measured at room temperature by resistance meter. Measurement technique: 4-bar probe with Keithley 237 Source Measuring Unit.

Typical adhesive properties

The synthetic adhesive used in the construction of 3M™ High Sheer Pressure Sensitive Cover Tape 2668 has been engineered to provide long term resistance to thermal degradation, even when exposed to environmental extremes such as the storage conditions depicted in the charts in this publication.

Storage conditions and shelf life

3M cover tape 2668 should be stored indoors, in its original packaging, in a controlled climate environment ranging 22°C - 28°C (72°F - 82°F) and not exceeding 70% relative humidity. The product should be protected from direct sunlight and should be used on a "first-in, first-out" basis.

The shelf life of 3M cover tape 2668 is two years from the date of manufacture when stored according to the recommended storage conditions.

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Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

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Electronics Materials Solutions Division
3M Center, Building 224-3N-11
St. Paul, MN 55144-1000
1-800-251-8634 phone
651-778-4244 fax
www.3M.com/electronics

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