



Conductive 2668 High Shear Pressure-Sensitive Cover Tape

Technical Data – June, 2001

Product Description

3M™ Conductive 2668 High Shear Pressure Sensitive Cover Tape is a transparent, conductive polyester film tape with a synthetic, room temperature, pressure-sensitive adhesive (PSA) zone along each edge. 3M 2668 Cover Tape has been designed to seal electrical and electronic components into 3M's family of polycarbonate carriers.

Construction

Backing

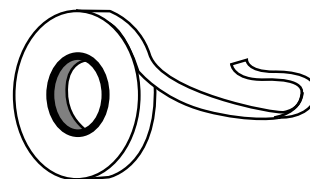
Transparent polyester film

Adhesive

Pressure-sensitive, synthetic polymer

Inner Face

Transparent, conductive, polyester film



Available Widths

3M 2668 Cover Tape is available in the narrow widths listed below, with adhesive exposed only along the edges. 3M 2668 Cover Tape is supplied in 200 meter, splice-free rolls.

Standard Sizes	Widths (mm)						
Carrier	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	0.67	0.8	1	1	1	1	1
Roll Length (meters)	200	200	200	200	200	200	200

Typical Adhesive Properties

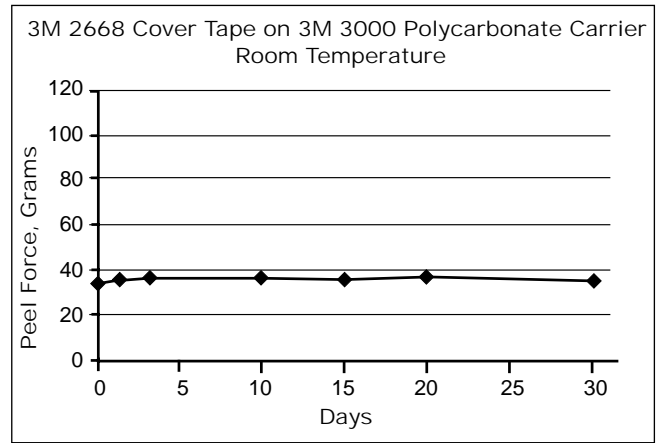
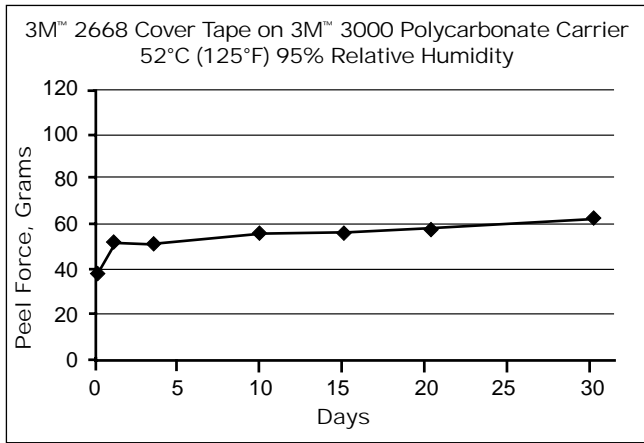
3M 2668 Cover Tape has a simple process window. Desirable initial peel force values can be achieved through the application of adequate pressure to the non-adhesive surface of the cover tape over the adhesive stripes with a reciprocating shoe, or compliant roller mechanism. The charts on the following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

Packaging Options

3M 2668 Cover Tape is available in standard or cleanroom-compatible packaging.

Standard: Product 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 in a cardboard carton.

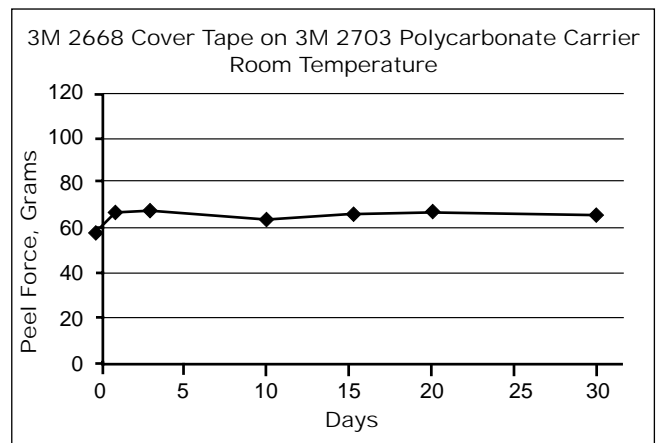
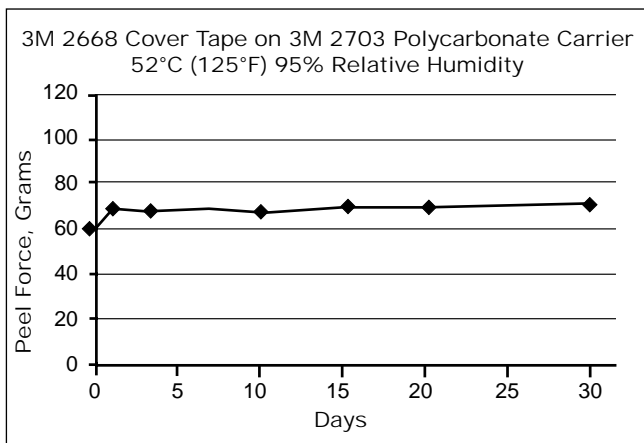
Cleanroom-Compatible: Product is standard but packaged in two polyethylene bags as opposed to one. This format allows the cover tape to be used and stored in a cleanroom environment in a bag that has not had direct contact with the cardboard carton.



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

Sealing Parameters:

Cover Tape: 3M 2668 Cover Tape, 5.4 mm
 Carrier: 3M 3000 Carrier Tape, 8.0 mm
 Sealing Mode: Continuous (Rubber Pressure Roller)
 Pressure: 60 psig
 Speed: 1.5 linear meters/minute
 Temperature: Room Temperature, ≈ 23°C (73°F)



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Sealing Parameters:

Cover Tape: 3M 2668 Cover Tape, 5.4 mm
 Carrier: Non-Conductive 2703 Carrier Tape, 8.0 mm
 Sealing Mode: Continuous (Rubber Pressure Roller)
 Pressure: 30 psig
 Speed: 1.5 linear meters/minute
 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/EIA-481 Standard. Sealed samples used in these studies were stored under the conditions noted, wound on 180mm diameter reels to simulate typical production use. Samples being tested at elevated temperature and humidity were permitted a minimum equilibration period of 4 hours at room temperature prior to testing to simulate actual use conditions.

Adhesive Properties

The synthetic adhesive used in the construction of 3M™ Conductive 2668 High Shear Pressure Sensitive Cover Tape 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

3M 2668 Cover Tape should be stored indoors, in its original packaging, in a controlled climate environment not exceeding 35°C (95°F) and 70% relative humidity. The product should be protected from direct sunlight and should be used on a “first-in, first-out” basis.

Shelf Life

It is recommended that 3M 2668 Cover Tape be used within two years from the date of manufacture when stored according to the recommended storage conditions.

3M Conductive 2668 High-Shear Pressure Sensitive Cover Tape

Description	Units	Typical Performance	Test Notes	Test Method
Material Properties	Backing Type Adhesive Type Sealing Temp	Polyester PSA Room Ambient	1	
Physical Properties	Tensile Strength Elongation Transparency Haze Thickness Shear Strength @ 50°C Shear Strength @ 40°C Shear Strength @ 23°C	N/mm Width % % % mm (in) minutes minutes minutes	7.0 150 80 7 .061 (.0024) 100 1,000 >10,000	2 2 3 3 ASTM-D3652 ASTM-D3654 ASTM-D3654 ASTM-D3654
Electrical Properties	Resistivity (Back Side) Resistivity (Component Side)	Ohms/sq Ohms/sq	Non-Conductive 10 ⁵	5 5 ASTM-D257 ASTM-D257
Product Format	Core Type Core Inner Diameter Roll Diameter Roll Length	Material mm (in) mm (in) m (yd)	Plastic 76.2 (3.0) 152 (6.0) 200 (218)	

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Test Notes

1. The application of heat to seal PSA cover tapes is specifically not recommended. Pressure in the range of 100 to 500 p.s.i. is sufficient to seal PSA adhesives.
2. Tensile tests are conducted at 21°C (70°F), 50% RH, in the machine direction of the polyester film.
3. Optical properties are measured using the BYK-Gardner Haze-Gard Plus Transmission Meter, Model 4725.
4. 0.5" x 0.5" adhesive secured to polycarbonate substrate with 1,000 gm load.
5. Resistivity is measured at room ambient temperature. Component side resistivity specification $1.0 \times 10^4 \leq R_s \leq 1.0 \times 10^6$ Ohms/sq. Measurement technique: 4-bar probe with Keithley 237 Source Measuring Unit or Prostat PRS 801.

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