



Conductive Pressure Sensitive Cover Tape 2666

Technical Data – December, 2004

Product Description

3M™ Conductive Pressure Sensitive Cover Tape 2666 is a transparent, conductive polyester film tape with a synthetic, room temperature, pressure sensitive adhesive (PSA) zone along each edge. 3M Cover Tape 2666 has been 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

Transparent polyester film

Adhesive

Pressure-sensitive, synthetic polymer

Inner Face

Transparent, conductive, polyester film

Available Widths

Cover Tape 2666 is available in the standard sizes listed below, with adhesive exposed only along the edges. All Cover Tape 2666 is supplied in 200 meter, splice-free rolls.

Standard Sizes	Widths (mm)										
	8	12	16	24	32	44	56	72	88	104	120
Carrier											
Cover Tape	5.4	9.3	13.3	21.3	25.5	37.4	49.4	66.5	82.4	97.0	110.0
Adhesive Exposure <i>each edge</i>	0.67	0.8	1	1	1	1	1	2.5	2	2.5	3
Roll Length (m)	200	200	200 500	200 500	200 500	200 500	200 500	200 500	200	200	200

Packaging Options

Cover Tape 2666 is available in standard or clean-room compatible packaging.

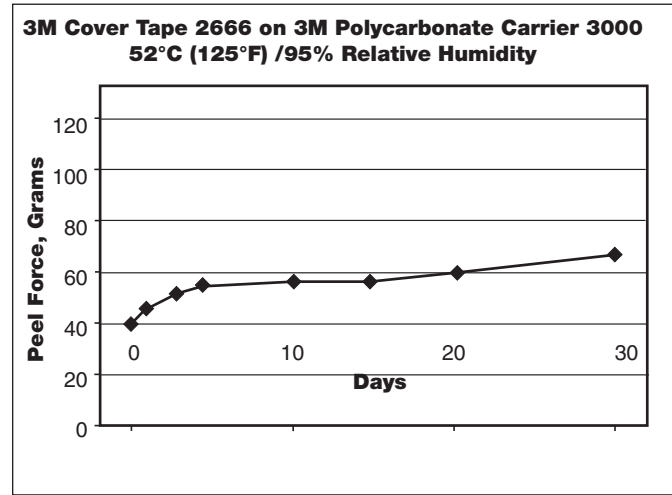
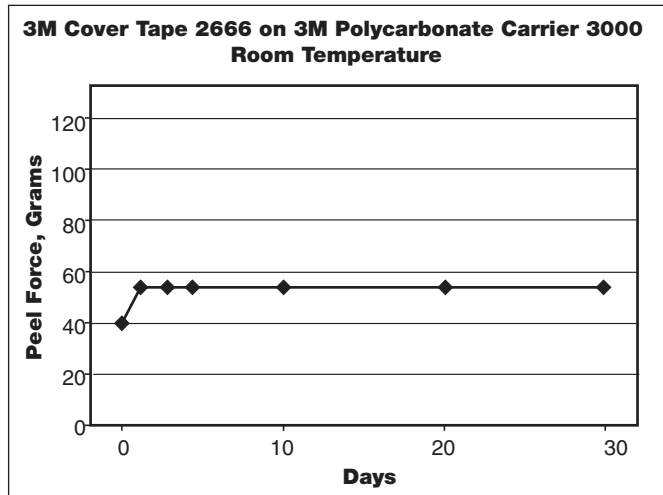
Standard: Product is provided on a plastic core, packaged with high density paper wafer inserts and a centering core in a single polyethylene bag and is placed between two endcaps in a cardboard carton. For carrier tapes with widths 88 mm and above, the cover tape is provided on paper cores.

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 in a bag that has not had direct contact with the cardboard carton.

Initial Adhesion and Aging Data

3M™ Conductive Pressure Sensitive Cover Tape 2666 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 following charts depict the typical room temperature and aging characteristics of 3M Cover Tape 2666 after sealing to 3M™ Conductive Polycarbonate Carrier 3000.



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

Graph Notes

Notes: The graphs in this document represent sealing performance attained under the conditions specifically stated in the sealing parameters section below. 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-C Standard. Sealed samples used in these studies were stored under the conditions noted, wound on 330 mm diameter reels to simulate typical production use. Samples being tested at elevated temperature and humidity were permitted a minimum equilibration period of one hour at room temperature prior to testing to simulate actual use conditions.

Sealing Parameters

Cover Tape: 3M Conductive Pressure Sensitive Cover Tape 2666, 21.3 mm
Carrier: 3M Conductive Polycarbonate Carrier Tape 3000, 24 mm
Sealing Mode: Continuous (Rubber Pressure Roller)
Pressure: 3 bar (42 psig)
Speed: 1.5 linear meters/minute
Temperature: Room Temperature \approx 23°C (73°F)

Typical Adhesive Properties

The synthetic adhesive used in the construction of 3M™ Conductive Pressure Sensitive Cover Tape 2666 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 Cover Tape 2666 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 Cover Tape 2666 be used within three years from the date of manufacture when stored according to the recommended storage conditions.

3M Conductive Pressure Sensitive Cover Tape 2666

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 Transmission Clarity Haze Thickness	N/mm Width % % % % mm (in)	7.0 150 77.6 91.8 11.1 .061 (.0024)	2 ASTM-D3759 3 ASTM-D1003 3 ASTM-D1003 3 ASTM-D3652
Electrical Properties	Resistivity (Back Side) Resistivity (Component Side)	Ohms/sq Ohms/sq	Non-Conductive 10 ⁵	4 4 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), 216 (8.5) 200 (218), 500 (546.5)	5

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

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 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. 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.
5. Paper cores are used for cover tapes ≥ 82.4 mm.

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