# Non-Conductive 2658 High Shear Pressure-Sensitive Cover Tape

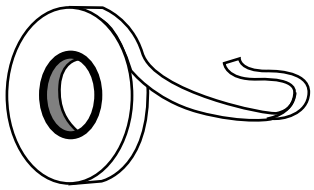
**Technical Data – May, 2000**

## Product Description

3M™ Non-Conductive 2658 High Shear Pressure-Sensitive Cover Tape is a transparent, non-conductive polyester film tape with a synthetic, room temperature, pressure-sensitive adhesive [PSA] zone along each edge. 2658 Cover Tape has been designed to seal electrical and electronic components into 3M's family of polycarbonate carriers. It may also work well with other embossed carrier tapes.

## Construction

| **Backing** | **Adhesive** | **Inner Face** |
|---|---|---|
| Transparent polyester film | Pressure-sensitive, synthetic polymer | Transparent, non-conductive, polyester film |



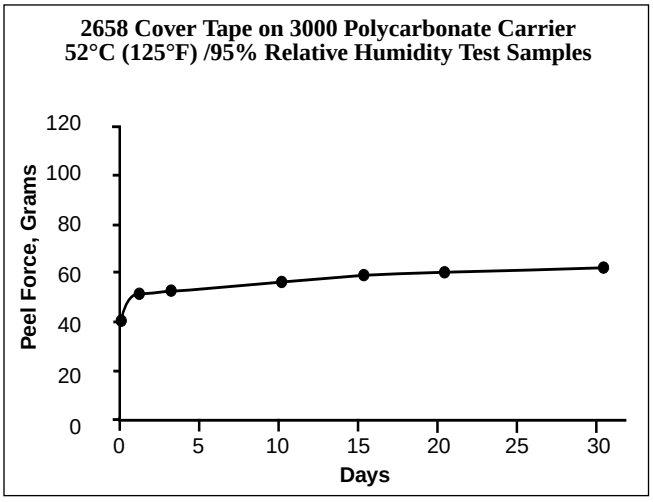
## Available Widths

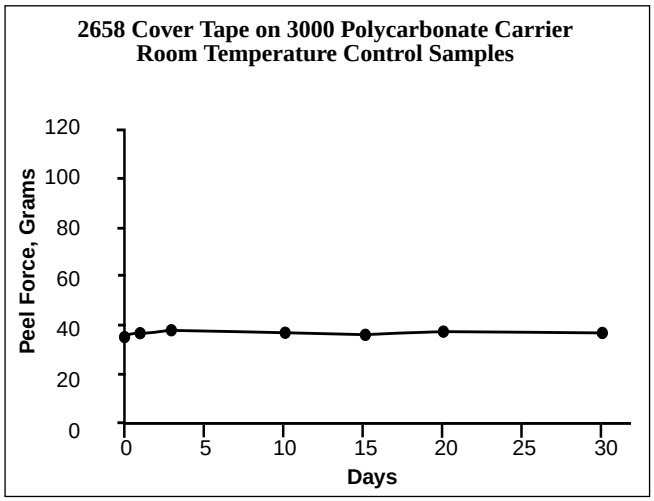
2658 Cover Tape is available in the narrow widths listed below, with adhesive exposed only along the edges. 2658 Cover Tape is supplied in 200 meter, splice-free rolls.

| Standard Size | mm Width | |
|---|---|---|
| **Carrier** | 8 | 12 |
| **Cover Tape** | 5.4 | 9.3 |
| **Adhesive Exposure** ***each edge*** | 0.67 | 0.8 |
| **Roll Length (meters)** | 200 | 200 |

## Typical Adhesive Properties

Non-Conductive 2658 High Shear Pressure-Sensitive 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 following charts depict the typical room temperature and aging characteristics of 2658 Cover Tape after sealing to 3M™ Conductive 3000 Polycarbonate Carrier and 3M Non-Conductive 2703 Polycarbonate Carrier.

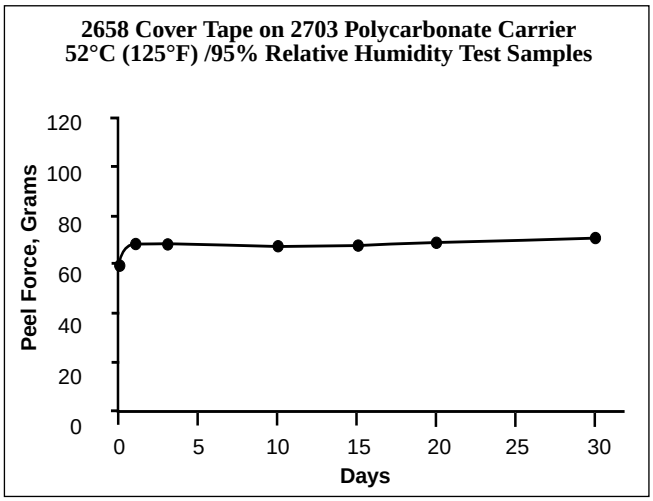


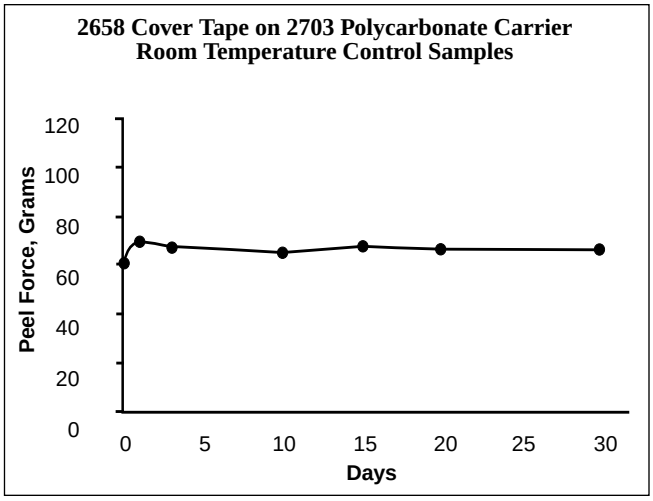




Note: The technical information and data presented here should be considered representative or typical only, and should not be used for specification purposes.

## Sealing Parameters:

| | |
|---|---|
| Cover Tape: | Non-Conductive 2658 Cover Tape, 5.4 mm |
| Carrier: | Conductive 3000 Carrier Tape, 8.0 mm |
| Sealing Mode: | Continuous (Rubber Pressure Roller) |
| Pressure: | 60 psi |
| Speed: | 1.5 linear meters/minute |
| Temperature: | Room Temperature, ≈ 23°C (73°F) |

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## Sealing Parameters:

| | |
|---|---|
| Cover Tape: | Non-Conductive 2658 Cover Tape, 5.4 mm |
| Carrier: | Non-Conductive 2703 Carrier Tape, 8.0 mm |
| Sealing Mode: | Continuous (Rubber Pressure Roller) |
| Pressure: | 30 psi |
| 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™ Non-Conductive 2658 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 Non-Conductive 2658 High Shear Pressure-Sensitive 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 Non-Conductive 2658 High Shear Pressure-Sensitive Cover Tape be used within 1 year from the date of manufacture when stored according to the recommended storage conditions.

## Non-Conductive 2658 High Shear Pressure-Sensitive Cover Tape

| 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 | ASTM-D3759 |
| | Elongation | % | 150 | | ASTM-D3759 |
| | Transparency | % | 80 | 3 | |
| | Thickness | mm (in) | .061 (.0024) | | ASTM-D3652 |
| | Shear Strength @ 50c | minutes | 100 | 4 | ASTM-D3654 |
| | Shear Strength @ 40c | minutes | 1,000 | 4 | ASTM-D3654 |
| | Shear Strength @ 23c | minutes | >10,000 | 4 | ASTM-D3654 |
| **Electrical Properties** | Resistivity (Back Side) | Ohms/sq | Non-Conductive | 5 | ASTM-D257 |
| | Resistivity (Component Side) | Ohms/sq | Non-Conductive | 5 | ASTM-D257 |
| **Product Format** | Core Type | Material | Plastic | | |
| | Core Inner Diameter | mm (in) | 76.2 (3.0) | | |
| | Roll Diameter | mm (in) | 152 (6.0) | | |
| | Roll Length | m (yd) | 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 light transmission.
4. 0.5" x 0.5" adhesive secured to polycarbonate substrate with 1,000 gm load.
5. Resistivity is measured at room ambient temperature.
   Measurement technique: 4-bar probe with Keithley 237 Source Measuring Unit.

## Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-666-8273. Address correspondence to: 3M Electronic Handling & Protection Division, 6801 River Place Blvd., Austin, TX 78726-9000. Our fax number is 1-800-826-8893.

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