

# 3M™ Electrically Conductive Acrylic Pad (eCAP) 7850

## Product Description

3M™ Electrically Conductive Acrylic Pad (eCAP) represents a breakthrough in electrically conductive PSA tape and conductive gasket technology. 3M™ Electrically Conductive Acrylic Pad 7850, a double sided tape, consists of a high performance 3M adhesive loaded with conductive fillers and is ideal for EMI/RFI shield and EMI/RFI gasket to metal surfaces. The PSA matrix is filled with carbon fillers which allow thermal and electrical interconnection between substrates through the adhesive thickness (the “Z-axis”) and also provides electrically conducting in the plane of the adhesive (“X-Y Axis”). 3M eCAP 7850 is ideal for electrical and thermal bonding and ESD grounding of electronic and electrical devices. 3M eCAP 7850 can be applied as die cut parts or in roll form and has good adhesion to common EMI/RFI substrates such as aluminum, stainless steel, and smooth gasket materials. 3M eCAP 7850 also electrically connects and mechanically bond EMI/RFI shield and gasket to metal frames and enclosures. The low contact resistance and tape construction result in good EMI performance.

## Proprietary Technology

3M™ Electrically Conductive Acrylic Pad 7850 is a self-stick EMI gasket pad or tape which provides good electrical conductivity for EMI shielding and ESD grounding. Made with a proprietary technology, the pad achieves a unique filler distribution in three dimensional structure throughout the adhesive matrix. This makes the tape an excellent choice for use near electronic components and assemblies. The tape is supplied on 50 meter rolls in width 600 mm.

## Product Construction

| Product                   | 3M™ Electrically Conductive Acrylic Pad 7850                    |
|---------------------------|-----------------------------------------------------------------|
| Color                     | Black                                                           |
| Adhesive Type             | Filled Acrylic                                                  |
| Filler Type               | Carbon particles                                                |
| Adhesive Thickness*       | 0.15 mm                                                         |
| Release Liner (Face Side) | 50 µm silicone treated PET film<br>Transparent and easy release |
| Release Liner (Back Side) | 75 µm silicone treated PET film<br>Printed and tight release    |

\*Contact your local 3M sales representative for additional information on thicknesses and width.



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## Typical Properties

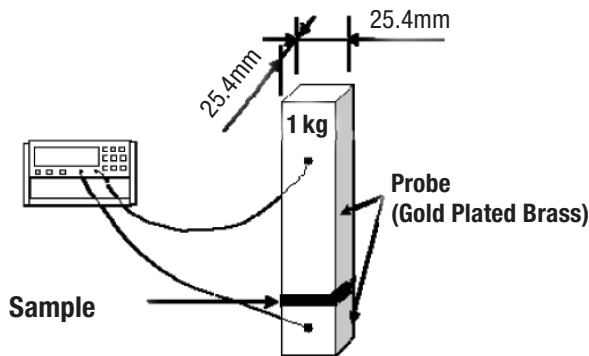
**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

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| Product No.                                    | 7850                      | Test Method |
|------------------------------------------------|---------------------------|-------------|
| <sup>1</sup> Z-axis Resistance 1 inch x 1 inch | 0.5 Ω                     | 3M TM       |
| Z-axis thermal impedance                       | 0.7 °C-in <sup>2</sup> /W | 3M TM       |
| Surface Electrical Resistance                  | 10 Ω / □                  | 3M TM       |
| 90° Peel Adhesion (FS)                         | 1500 gf / inch            | 3M TM       |
| 90° Peel Adhesion (BS)                         | 1500 gf / inch            | 3M TM       |
| <sup>2</sup> Compression Stress                | 14 kg / sq. in.           | 3M TM       |

<sup>1</sup>Z-axis Resistance: Measured between gold plated brass probes with 1 kg load.  
Contact area: 25.4 mm x 25.4 mm, Dwell time: 60 seconds.

<sup>3</sup>Compression Stress: Measured at 25% compression (12 mm/min).



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## Certification/Recognition

**MSDS:** 3M has not prepared a MSDS for this product which is not subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, the product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

**TSCA:** This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements.

**RoHs Complaint/REACH Compliant:** This product complies with the European Union's "Restriction of Hazardous Substances" (RoHs) initiative and with European REACH regulations 2002/95/EC and 2005/618/EC.

## For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M, Electronics Markets Materials Division, 3M Center, Building 225-3S-06, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

## Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

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### Electronics Markets Materials Division

3M Center, Building 225-3S-06  
St. Paul, MN 55144-1000  
1-800-251-8634 phone  
651-778-4244 fax  
[www.3M.com/electronics](http://www.3M.com/electronics)

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60-5002-0372-8

