3M™ Electrically Conductive Acrylic Pad (eCAP) 7810

Product Description

3M™ Electrically Conductive Acrylic Pad (eCAP) 7810, represents a breakthrough in electrically conductive PSA tape and conductive gasket technology. 3M (eCAP) 7810, a double-sided tape, consists of a high-performance 3M adhesive with conductive fillers. 3M (eCAP) 7810, a conductive tape line with double-sided adhesion, also is designed to provide an electrical path with adhesive bonding and heat-transfer path between heat generating components and other cooling devices. The electrically conductive tape is provided on a silicone-treated polyester release liner for ease of handling and die cutting. The conductive fillers in the product enhance the physical strength of the tape to improve the re-work and handling.

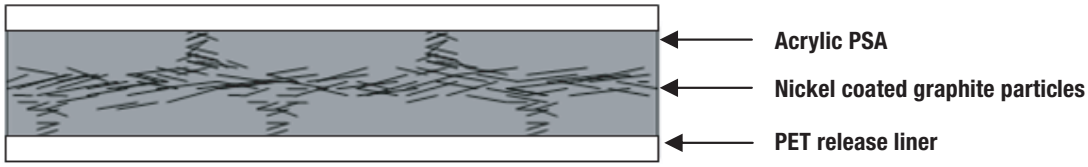
Specifications

3M™ Electrically Conductive Acrylic Pad (eCAP) 7810 is a self-stick EMI gasket pad, 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.

Applications

3M™ Electrically Conductive Acrylic Pads (eCAP) 7810 are a combination of established 3M adhesive technology with state of-the-art conductive technology. The PSA matrix is filled with conductive fillers which allow interconnection between substrates through the adhesive thickness (the “Z-axis”), and also helps provide electrical conductivity and EMI shielding in the plane of the adhesive (“X-Y Axis”). 3M (eCAP) 7810 is ideal for EMI/RFI shield and ESD grounding of electronic components. 3M (eCAP) 7810 can be applied as die cut parts or in roll form and has good adhesion to common EM/RFI substrates such as aluminum, stainless steel, and smooth gasket materials.

Construction



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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.

Product Number	3M™ Electrically Conductive Acrylic Pad (eCAP) 7810	Test Method
Color	Grey	
Pad Thickness*	0.15, 0.20, 0.25, 0.30 mm	3M TM
Conductive Filler	Nickel Graphite	
Matrix	Acrylic Pressure-Sensitive Adhesive	
Specific Gravity	1.3 g/cm^3	3M TM
180° Peel Adhesive	1000 gf/inch	3M TM
Surface Resistance	10 Ω/ □	3M TM
Z-axis Resistance	0.5 Ω	3M TM
Compression Deflection[1]	12 kg/in^2	3M TM
Compression Set[2]	10%	3M TM
Thermal Conductivity	0.8 W/mk	3M TM

[1] Compression Deflection: Measured at 25% compression (12 mm/min)

[2] Compression Set: Compressed 25% for 22 hrs at 70°F, expressed as a percentage of the original thickness, as follows:

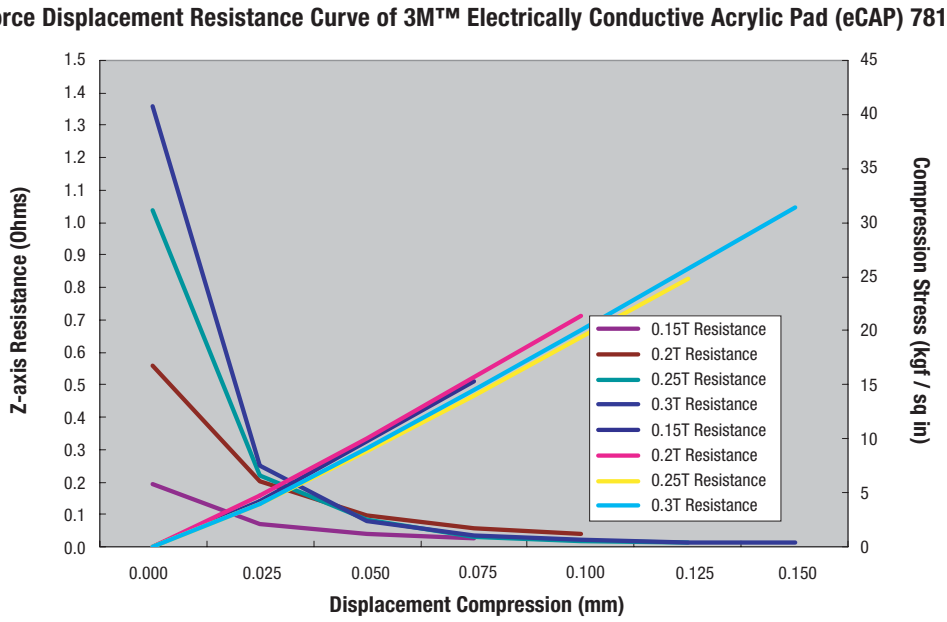
Cd = $[(t_o - t_f) / t_o] \times 100$

Cd = compression set expressed as a percent of the original thickness

t_o = original thickness of test specimen

t_f = final thickness of test specimen

Force Displacement Resistance Curve of 3M™ Electrically Conductive Acrylic Pad (eCAP) 7810: Z-Axis Resistance



Shelf Life and Storage

This product, in its original roll format, has a shelf life of 24 months from date of manufacture when stored in the product's original packaging materials and at 21ºC and 50% Relative Humidity.

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

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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

60-5002-0447-8

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