

3M™ Electrically Conductive Acrylic Pad, eCAP 7810

Data Sheet

October 2008

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. 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.

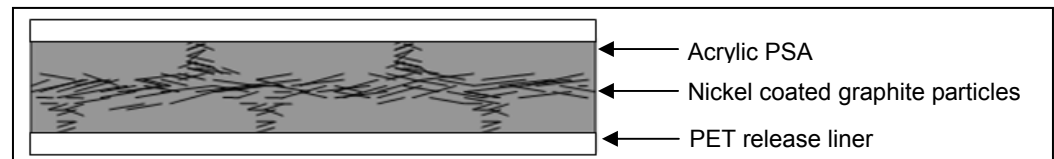
Specifications

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

eCAP 7810 pads 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"). eCap 7810 is ideal for EMI/RFI shield and ESD grounding of electronic components. 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.

Product Description of 3M eCAP 7810



3M

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Typical Properties

Technical information and data should be considered representative or typical only and should not be used for specification purposes.

Product Number	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 Adhesion	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:

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

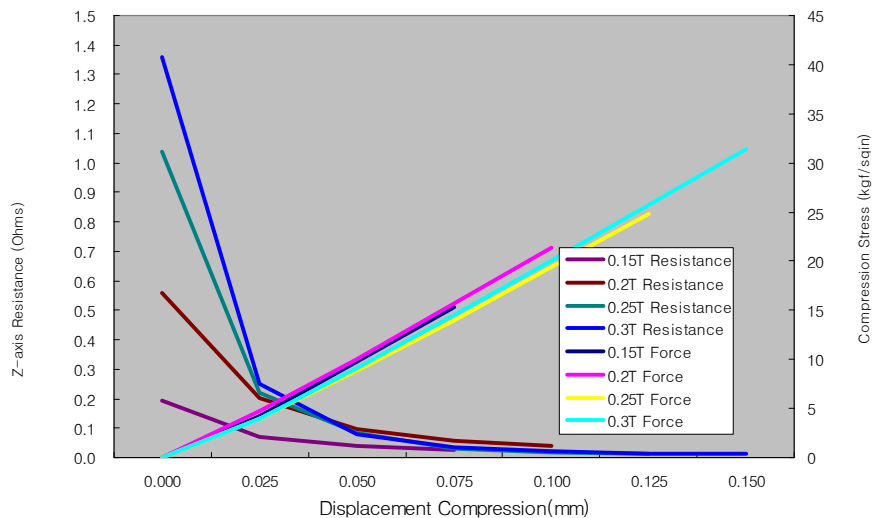
C_d = compression set expressed as a percent of the original thickness

t_o = original thickness of test specimen

t_f = final thickness of test specimen

Force Displacement Resistance Curve of 7810: Z-Axis Resistance

Force Displacement Resistance Curve of 7810: Z-Axis Resistance



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Shelf Life & Storage This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (50°F/10°C to 80°F/27°C and <75% relative humidity).

Availability Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1-800-245-3573.

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