# **3M**

# **Double Coated Tissue Tapes**

9810T, 9888T

Technical Data August, 2018

### **Product Description**

3M<sup>TM</sup> Double Coated Tissue Tape 9810T and 9888T feature a tissue carrier for dimensional stability and improved handling with ease of die cutting and laminating. Double-coated acrylic adhesive is suitable for various surface, and possess good performance. 3M<sup>TM</sup> Product 9810T and 9888T could control adhesive flow into open cell foam and controlled caliper for bond to application surface. For foam laminating, it provides excellent foam stability to reduce stretching and allows to more precise alignment during application. The high-density and high-strength paper liner is excellent for converting process.

3M<sup>TM</sup> 9888T is UL recognized (File MH28421). Please see the UL listing for details.

Constructions				
Product Number	Adhesive Type/ Color¹	Adhesive Thickness (mm)	Liner Color, Type, Print	Liner Caliper
3M™ 9810T	Acrylic Translucent	0.10 mm	White PE coated paper	0.10mm
3M™ 9888T	Acrylic Translucent	0.15 mm	White PE coated paper with red 3M logo printing	0.15mm

<sup>&</sup>lt;sup>1</sup>The adhesive color is translucent with a very slight yellow cast. The yellow cast is not typically visible in a single adhesive layer.

### $3M^{\text{\tiny IM}}$ Double Coated Tissue Tapes

I.

9810T • 9888T

Typical Physical Properties and Performance Characteristics Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

### Adhesion to Surfaces (Unit: kgf/in)

ASTM D3330 modified (180° peel, 2 mil aluminum foil backing)

	9810T	9888T
Dwell		
15min RT SUS	1.9	2.9
72 hour RT SUS	2.3	3.2
15min RT ABS		2.2
72 hour RT ABS		2.4
15min RT PC		2.6
72 hour RT PC		2.7
15min RT PP		1.9
72 hour RT PP		2.2

### II. Relative High Temperature Operating Ranges

Short term (minutes/hours) 120°C Long term (days/weeks) 80°C

#### III. Static Shear

Modified ASTM D3654 - 1" x 1" sample area - aluminum foil to stainless steel

#### **Minutes to Failure**

Temperature	Load	9810T	9888T
23°C	1Kg	10000+	

### **Application Techniques**

For maximum bond strength (during installation of the final part) the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane\* (for oily surfaces) or isopropyl alcohol\* for plastics. Use reagent grade solvents since common household materials like rubbing alcohol frequently contain oils to minimize the drying affect on skin and can interfere with the performance of a pressure-sensitive adhesive.

It is necessary to provide pressure during lamination (1.5-20 pli recommended) and during final part installation (10-15 psi) to allow the adhesive to come into direct contact with the substrate. Using a hard-edged plastic tool, which is the full width of the laminated part, helps to provide the necessary pressure at the point of lamination. Heat can increase bond strength when bonding to metal parts (generally this same increase is observed at room temperature over longer times, weeks). For plastic parts, the bond strength is not enhanced with the addition of heat.

The ideal adhesive application temperature range is 60°F (15.6°C) to 100°F (38°C). Application is not recommended if the surface temperature is below 50°F (10°C) because the adhesive becomes too firm to adhere readily. Once properly applied, at the recommended application temperature, low temperature holding is generally satisfactory.

## **Application Ideas**

- Long term bonding of graphic nameplates and overlays ("subsurface" printed polycarbonate
  or polyester) to metal and high surface energy plastics in the aerospace, medical and
  industrial equipment, automotive, appliance and electronic markets.
- Bonding metal nameplates and rating plates in the aerospace, medical and industrial equipment, automotive, appliance and electronic markets.
- Bonding graphic overlays for membrane switches and for bonding the complete switch to the equipment surface.
- High speed processing of parts in the medical, telecommunications and electronics markets (medical components, durable labels, flexible circuits).
- Lamination to industrial foams for rotary die-cutting of small gaskets for industrial and electronics markets.

### **3M<sup>™</sup> Double Coated Tissue Tapes**

9810T • 9888T

### **Product Use**

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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This EDB product was manufactured under a 3M quality system registered to ISO 9001: 2015 standards.



**Electric Device Bonding** 3M Taiwan

www.3mtape.com.tw

### **UL Online Certifications Directory**

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### **Marking and Labeling System Materials - Component**

See General Information for Marking and Labeling System Materials - Component

3M TAIWAN LTD MH28421

13TH FL LOTUS BLDG 136 JEN AI RD, SEC 3 TAIPEI, 106 TAIWAN

#### Pressure-sensitive laminating adhesives

"Double Coated Tissue Tape 9888T". For bonding aluminum (0.050 - 0.200 mm.) to aluminum and galvanized steel, maximum temperature 150 C (302 F), minimum temperature -40 C (-40 F); acrylonitrile butadiene styrene (ABS) and polypropylene, maximum temperature 80 C (176 F), minimum temperature -40 C (-40 F); polystyrene, maximum temperature 60 C (140 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water. Also suitable where exposed outdoors when affixed to the surfaces mentioned above except for acrylonitrile butadiene styrene (ABS).

"Double Coated Tissue Tape 9888T". For bonding polycarbonate (0.125 - 0.500 mm.) to aluminum and galvanized steel, maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F); acrylonitrile butadiene styrene (ABS) and polypropylene, maximum temperature 80 C (176 F), minimum temperature -40 C (-40 F); polystyrene, maximum temperature 60 C (140 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water. Also suitable where exposed outdoors when affixed to the surfaces mentioned above except for acrylonitrile butadiene styrene (ABS) and aluminum.

"Double Coated Tissue Tape 9888T". For bonding polyester (0.050 - 0.100 mm.) to aluminum and galvanized steel, maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F); acrylonitrile butadiene styrene (ABS) and polypropylene, maximum temperature 80 C (176 F), minimum temperature -40 C (-40 F); polystyrene, maximum temperature 60 C (140 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water. Also suitable where exposed outdoors when affixed to the surfaces mentioned above except for acrylonitrile butadiene styrene (ABS).

D/C PET Tape 8008PT, D/C PET Tape 8008DL, D/C PET Tape 8018PT, D/C PET Tape 8018DL, D/C PET Tape 8408PT, D/C PET Tape 8408PT, D/C PET Tape 8608PT. For bonding aluminum (0.050 - 0.200 mm.) to aluminum, galvanized steel, stainless steel and acrylonitrile butadiene styrene (ABS), maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water.

D/C PET Tape 8008PT, D/C PET Tape 8008DL, D/C PET Tape 8018PT, D/C PET Tape 8018DL, D/C PET Tape 8408PT, D/C PET Tape 8408PT, D/C PET Tape 8408PT, D/C PET Tape 8608PT, D/C PET Tape 8608PT. For bonding polycarbonate (0.125 - 0.508 mm.) to aluminum, galvanized steel, stainless steel and acrylonitrile butadiene styrene (ABS), maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water.

D/C PET Tape 8008PT, D/C PET Tape 8008DL, D/C PET Tape 8018PT, D/C PET Tape 8018DL, D/C PET Tape 8408PT, D/C PET Tape 8408PT, D/C PET Tape 8608DL and D/C PET Tape 8006PT. For bonding polyester (0.050 - 0.100 mm.) to aluminum, galvanized steel, stainless steel and acrylonitrile butadiene styrene (ABS), maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water.

WSP-1 . For bonding polycarbonate (0.125 - 0.500 mm.) to aluminum, galvanized steel, acrylonitrile butadiene styrene (ABS), polycarbonate and polymethyl methacrylate (PMMA), maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water. Also suitable where exposed outdoors when affixed to the surfaces mentioned above except for polymethyl methacrylate (PMMA).

WSP-1 . For bonding polyester (0.050 - 0.100 mm.) to aluminum, galvanized steel, acrylonitrile butadiene styrene (ABS), polycarbonate and polymethyl methacrylate (PMMA), maximum temperature 100 C (212 F), minimum temperature -40 C (-40 F). Suitable where exposed indoors to high humidity and occasional exposure to water. Also suitable where exposed outdoors

when affixed to the surfaces mentioned above except for polymethyl methacrylate (PMMA).

Marking: Company name and product designation on roll core or packaging of product.  $\underline{\text{Last Updated}} \text{ on } 2005\text{-}12\text{-}09$ 

Questions?

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