3M™ Electronic Double Sided Tapes
9119-50 • 9119-85 • 9119-100 • 9119-140

Product Description
3M™ Electronic Double Sided Tapes 9119-50, 9119-85, 9119-100 and 9119-140 have a firm silicone pressure sensitive adhesive coated on one side of a polyester film carrier and a high performance acrylic 3M™ Standard adhesive coated on the other side of the carrier. The silicone adhesive features strong holding power to various silicone surfaces, good temperature performance and good solvent resistance. These tapes also feature high adhesion of the standard acrylic adhesive to a variety of surfaces along with good high temperature performance and good solvent resistance.

Product Construction

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Faceside¹ Adhesive Type/Thickness</th>
<th>Carrier Type/Thickness</th>
<th>Backside² Adhesive Type/Thickness</th>
<th>Faceside Thickness</th>
<th>Backside Liner Color, Type, Thickness</th>
<th>Total Tape Thickness (without liner)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-50</td>
<td>Standard Acrylic 0.014mm (0.6 mil)</td>
<td>Clear Polyester 0.019mm (0.5 mil)</td>
<td>Silicone 0.023mm (0.9 mil)</td>
<td>White, Polycrusted Kraft, gray 3M Logo 0.14mm (5.5 mil)</td>
<td>Clear PET 0.050mm (2.0 mil)</td>
<td>0.05mm (2.0 mil)</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-85</td>
<td>Standard Acrylic 0.029mm (1.1 mil)</td>
<td>Clear Polyester 0.019mm (0.6 mil)</td>
<td>Silicone 0.040mm (1.6 mil)</td>
<td>White, Polycrusted Kraft, gray 3M Logo 0.14mm (5.5 mil)</td>
<td>Clear PET 0.050mm (2.0 mil)</td>
<td>0.085mm (3.3 mil)</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-100</td>
<td>Standard Acrylic 0.030mm (1.2 mil)</td>
<td>Clear Polyester 0.025mm (1.0 mil)</td>
<td>Silicone 0.045mm (1.8 mil)</td>
<td>White, Polycrusted Kraft, gray 3M Logo 0.14mm (5.5 mil)</td>
<td>Clear PET 0.050mm (2.0 mil)</td>
<td>0.100mm (4.0 mil)</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-140</td>
<td>Standard Acrylic 0.041mm (1.6 mil)</td>
<td>Clear Polyester 0.025mm (1.0 mil)</td>
<td>Silicone 0.074mm (2.9 mil)</td>
<td>White, Polycrusted Kraft, gray 3M Logo 0.14mm (5.5 mil)</td>
<td>Clear PET 0.050mm (2.0 mil)</td>
<td>0.140mm (5.5 mil)</td>
</tr>
</tbody>
</table>

Note 1: Faceside (FS) adhesive is on the interior of the roll, exposed when unwound.
Note 2: Backside (BS) adhesive is on the exterior of the roll, exposed when liner is removed.

Features
- The polyester carrier provides dimensional stability and improved handling for ease of die cutting and lamination.

Application Ideas
- Applications where bonding silicone rubber to high surface energy materials is necessary.
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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.

Peel Strength

<table>
<thead>
<tr>
<th>Product Number</th>
<th>20 minute RT</th>
<th>20 minute RT</th>
<th>72 hr RT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stainless steel Acrylic PSA side</td>
<td>Silicone rubber Silicone PSA side</td>
<td></td>
</tr>
<tr>
<td></td>
<td>oz/in</td>
<td>N/cm</td>
<td>kg/25.4 mm</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-50</td>
<td>40</td>
<td>4.4</td>
<td>1.1</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-85</td>
<td>65</td>
<td>7.1</td>
<td>1.8</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-100</td>
<td>65</td>
<td>7.1</td>
<td>1.8</td>
</tr>
<tr>
<td>3M™ Electronic Double Sided Tape 9119-140</td>
<td>82</td>
<td>9.0</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Tested in accordance with ASTM D3330 test method. 180 degree peel, Backside substrate: 2mil thick polyester film, Dwell temp: room temperature 23°C (73°F) for 20– 40 min.

Relative High Temperature Operating Ranges:

| Long Term (days, weeks) | 121°C (250°F) |
| Short Term (minutes, hours) | 177°C (350°F) |

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*

*Note: Carefully read and follow the manufacturer’s precautions and directions for use when working with solvents. These cleaning recommendations may not be in compliance with the rules of certain air quality management districts in California; consult applicable rules before use.

Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F). Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

General Information

- Silicone adhesive provides good bond to silicone rubber. 3M™ Standard Adhesive provides very high adhesion to a wide variety of materials, excellent shear holding power, high temperature resistance and excellent UV resistance.
Environmental Performance

**Humidity Resistance:** High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for seven days at 32°C (90°F) and 90% relative humidity.

**UV Resistance:** When properly applied, nameplates and decorative trim parts are not adversely affected by exposure to direct sunlight.

**Water Resistance:** Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

**Temperature Cycling Resistance:** High bond strength is maintained after cycling four times through:
- 4 hours at 70°C (158°F)
- 4 hours at -29°C (-20°F)
- 4 hours at 22°C (73°F)

**Chemical Resistance:** When properly applied, nameplates and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, Lamination Techniques for Converters of Laminating Adhesives or visit our website at www.3M.com/electronics.

For additional dispenser information, contact your local 3M sales representative.

Shelf Life of Tape

The shelf life of 3M™ Electronic Double Sided Tapes 9119-50, 9119-85, 9119-100 and 9119-140 is 12 months from the date of manufacture when stored in roll form in the original packaging materials at 16°C to 27°C (60°F to 80°F) and 40 to 60% relative humidity.
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Regulatory: For regulatory information about this product, contact your 3M representative.

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