



# High Strength Double Coated Tape with Adhesives 300LSE and 200MP 9496LE

Technical Data

April, 2013

**Product Description** 3M™ Double Coated Tape 9496LE with 3M™ Low Surface Energy Acrylic Adhesive 300LSE provides high bond strength to most surfaces, including many low surface energy plastics such as polypropylene and powder coated paints. The acrylic adhesive also provides excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts. 3M™ Double Coated Tape 9496LE offers the added feature of 3M™ High Performance Acrylic Adhesive 200MP on one side to provide excellent bond strength to a variety of high surface energy substrates.

| Construction Information |                                            |                                                |                             |                                                |                                                                                                                            |                                                     |
|--------------------------|--------------------------------------------|------------------------------------------------|-----------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|                          | Product Number                             | Faceside <sup>1</sup> Adhesive Type/ Thickness | Carrier Type/ Thickness     | Backside <sup>2</sup> Adhesive Type/ Thickness | Liner Color, Type, Print                                                                                                   | Total Tape Thickness (w/o liner)                    |
|                          | 3M™ Double Coated Tape 9496LE <sup>3</sup> | 200MP/ 0.0020" (0.005mm)                       | Clear PET 0.0020" (0.005mm) | 300LSE/ 0.0020" (0.005mm)                      | <sup>4</sup> Faceside Liner/ Tan, 58# Polycoated Kraft, "3M 467MP" Backside liner/ Tan, 58#, Polycoated Kraft, "3M 300LSE" | 0.0042" (0.11mm)/ 0.0042" (0.11mm) 0.0067" (0.17mm) |

**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.

**Note 4:** The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.012 g/cc.

**Note 5:** Backside liner is primary (stays with die-cut part); Faceside is secondary (removed first).

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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. |                               |
|                                                             | Product Number                                                                                                                                            | 3M™ Double Coated Tape 9496LE |
|                                                             | Adhesion to stainless steel<br>ASTM D3330 - 90 degree                                                                                                     | Oz/in<br>(N/100 mm)           |
|                                                             | - 15 minutes RT (FS/BS)                                                                                                                                   | 49/59 (54/65)                 |
|                                                             | - 72 hour RT (FS/BS)                                                                                                                                      | 98/76 (107/83)                |
|                                                             | - 72 hour 158°F (70°C) (FS/BS)                                                                                                                            | 111/112 (121/123)             |
|                                                             | Shear Strength - ASTM D3654<br>modified - (.5 inch <sup>2</sup> sample size)                                                                              |                               |
|                                                             | 1000 grams at 72°F (22°C)                                                                                                                                 | >10,000 min                   |
|                                                             | 500 grams at 158°F (70°C)                                                                                                                                 | >10,000 min                   |
|                                                             | Relative High Temperature<br>Operating Ranges:                                                                                                            |                               |
| Long Term (days, weeks)                                     |                                                                                                                                                           | 200°F (93°C)                  |
| Short Term (minutes, hours)                                 |                                                                                                                                                           | 300°F (149°C)                 |
| Relative Solvent Resistance                                 |                                                                                                                                                           | Very Good                     |

|                 |                                                    |           |
|-----------------|----------------------------------------------------|-----------|
| Available Sizes | Roll length, width, slitting tolerance, core size. |           |
|                 | Maximum Length in:                                 |           |
|                 | 1/2" to 63/64"                                     | —         |
|                 | 1" to 3"                                           | —         |
|                 | 3" to 48"                                          | —         |
|                 | 48" to 54"                                         | —         |
|                 | Tolerance                                          | —         |
|                 | Core ID                                            | —         |
|                 | Sheet Size                                         | 24" x 36" |
|                 |                                                    |           |

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## Features

- This tape has a moisture resistant polycoated kraft liner which can withstand high humidity conditions with minimal cockling or wrinkling.
- This tape has a film liner which can add dimensional stability to foams and other substrates and also makes it easier to handle the tape during slitting and die-cutting.
- Features a dual liner for ease in selective die-cutting.
- The bond strength of 3M™ Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.

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## Application Techniques

Bond strength is dependent upon the amount of adhesive to surface contact developed. Firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), will assist the adhesive in developing intimate contact with the bonding surface.

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

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

\*Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

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## Environmental Performance

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

**Humidity Resistance:** High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for seven days at 90°F (32°C) 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 158°F (70°C)
- 4 hours at -20°F (-29°C)
- 4 hours at 73°F (22°C)

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

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|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application Ideas</b>                                | <ul style="list-style-type: none"><li>• Foam to powder coated painted surfaces.</li><li>• Low surface energy substrates.</li><li>• Graphic attachment of high surface energy and low surface energy substrates.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>                                          | Store at room temperature conditions of 70°F (21°C) and 50% relative humidity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Shelf Life</b>                                       | If stored properly, product retains its performance and properties for 18 months from date of shipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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ISO 9001



This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

## Industrial Adhesives and Tapes Division Converter Markets

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