

March, 2018

3M™ Double Coated Tape 9495LE

Product Description

Finite Element Analysis (FEA) data is available for this product at: 3m.com/FEA

3M™ 9495LE is a 170µm Double Coated Polyester Tape featuring 3M™ Type 300LSE Acrylic Adhesive. Performance features include superior adhesion to Polypropylene, great resistance to consumer chemicals and excellent holding power. 3M type 300LSE acrylic adhesive has a long history of successfully bonding a wide variety of similar and dissimilar materials such as metals, most plastics, glass, papers, and painted surfaces.

Product Features

- This tape has a film carrier which can add dimensional stability to foams and other substrates and also makes it easier to handle the tape during slitting and die-cutting.
- The bond strength of 3M™ Laminating Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.



Technical Information Note

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

Typical Physical Properties

| Property | Values | | Method | Test Name |
|----------------------|------------------------------|---------|------------|-----------|
| Total Tape Thickness | 0.17 mm | 6.7 mil | ASTM D3652 | |
| Carrier Thickness | 0.013 mm | 0.5 mil | | |
| Adhesive Type | Acrylic | | | |
| Adhesive Carrier | Clear Polyester | | | |
| Liner | 58# Polycoated Kraft | | | |
| Liner Print | 300LSE | | | |
| Liner Color | Tan printed with "3M 300LSE" | | | Primary |
| Liner Thickness | 0.11 mm | 4.2 mil | | |

| Adhesive Thickness | | Test Name | Notes |
|--------------------|---------|-----------|--|
| 0.086 mm | | Backside | The caliper listed is based on a calculation from manufacturing controlled adhesive coat weight. While past data pages have listed nominal thicknesses of 1 and 2 mils, the coat weight (and theoretical caliper) has not changed. |
| 3.4 mil | | Backside | Backside adhesive is on the exterior of the roll, exposed when liner is removed. |
| 0.071 mm | 2.8 mil | Faceside | Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed. |

Property: Adhesive Thickness

Typical Performance Characteristics

| Property | Values | | Test Condition | Method | Notes |
|-----------------------------------|--------|--------|----------------------------|--------|-------|
| Short Term Temperature Resistance | 149 °C | 300 °F | Short Term (minutes, hour) | | |

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Typical Performance Characteristics (continued)

| Property | Values | | Test Condition | Method | Notes |
|----------------------------------|-------------|--------|---------------------------|------------|---------------------------------|
| Long Term Temperature Resistance | 93 °C | 200 °F | Long Term (day, weeks) | | |
| Static Shear | >10,000 min | | 1000 g @ Room Temperature | ASTM D3654 | 0.5 in ² sample size |
| Static Shear | >10,000 min | | 500 g @ 70°C (158°F) | ASTM D3654 | 0.5 in ² sample size |
| Solvent Resistance | Very Good | | | | |

| 180° Peel Adhesion | | Dwell/Cure Time | Dwell Time Units | Substrate |
|--------------------|-----------|-----------------|------------------|--------------------|
| 6.6 N/cm | 60 oz/in | 15 | min | Stainless Steel |
| 9.9 N/cm | 90 oz/in | 72 | hr | Stainless Steel |
| 14.2 N/cm | 130 oz/in | 72 | hr | Polycarbonate (PC) |
| 12 N/cm | 110 oz/in | 72 | hr | ABS |
| 13.7 N/cm | 125 oz/in | 72 | hr | Polypropylene (PP) |
| 10.4 N/cm | 95 oz/in | 72 | hr | Glass |

Property: 180° Peel Adhesion
 Method: ASTM D3330
 Temp C: 23C
 Temp F: 72F
 Environmental Condition: 50%RH
 Backing: Aluminum Foil
 notes: 12 in/min (300 mm/min)

Electrical and Thermal Properties

Breakdown Voltage: 7100 V

Typical Environmental Performance

Environmental Resistance

Humidity Resistance: High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 72hrs at 150°F (65°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 six times through:

8 hours at -4°F (-20°C)

8 hours at 150°F (65°C) /90% RH

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

Handling/Application Information

Application Examples

- Foam to powder coated painted surfaces.
- Low surface energy plastic adhesion.
- Lens bonding applications

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. Typical cleaning solvents are methyl ethyl ketone for metals or isopropyl alcohol for plastics. Carefully read and follow manufacturer's precautions and directions for use when using cleaning solvents.

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.

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 (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-251-8634.

Storage and Shelf Life

Store in original cartons at 70°F (21°C) and 50% relative humidity.

If stored under proper conditions, product retains its performance and properties for 24 months from date of manufacture.

Trademarks

3M is a trademark of 3M Company.

References

| Property | Values |
|-----------------------|---|
| 3m.com Product Page | https://www.3m.com/3M/en_US/p/d/b40060169/ |
| Safety Data Sheet SDS | https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9495LE |

Family Group

| | 9474LE | 9495LE |
|--|--------|------------------------------|
| Adhesive Thickness (mm) Test Name: Faceside | 0.071 | 0.071 |
| Liner Color Test Name: Primary | Tan | Tan printed with "3M 300LSE" |
| Short Term Temperature Resistance (°C) Test Condition: Short Term (minutes, hour) | 149 | 149 |

Table continued on next page

Family Group (continued)

| | 9474LE | 9495LE |
|---|-----------------|----------------------|
| Adhesive Thickness (mm) Test Name: Backside | 0.086 | 0.086 |
| Long Term Temperature Resistance (°C) Test Condition: Long Term (day, weeks) | 93 | 93 |
| Total Tape Thickness (mm) | 0.17 | 0.17 |
| Carrier Thickness (mm) | 0.013 | 0.013 |
| Adhesive Type | Acrylic | Acrylic |
| Adhesive Carrier | Clear Polyester | Clear Polyester |
| Liner | PCK | 58# Polycoated Kraft |
| Liner Thickness (mm) | 0.11 | 0.11 |

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.

Recognition/Certification

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.

Information

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