

# Technical Data Sheet

## 3M™ Adhesive Transfer Tape 8153LE

### Product Description

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

3M™ Adhesive Transfer Tapes 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.



### Product Features



- 3M™ Adhesive 300LSE is a hi-strength acrylic adhesive that provides a very high bond strength to most surfaces.
- Excellent bond to low surface energy plastics such as polypropylene and powder coatings.
- Excellent adhesion to lightly oiled surfaces typical of machine parts.
- Thickness range of 2.3 and 3.6 mils for use on smooth, or rough surfaces.
- Extremely smooth adhesive for excellent graphics appearance.
- Polycoated kraft liner for die-cutting end tabs and waste removed nameplates on a common carrier.
- 3M™ Adhesive Transfer Tape 8153LE is double lined for selective die-cutting.

### 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                                   | Additional Information   |
|---|--|--|
| Adhesive Type   | 3M High Strength Acrylic Adhesive 300LSE |  |
| Liner   | PCK<br>PCK                               |  |
| Primary Liner Type  | 83# Polycoated Kraft                     | View  |
| Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first) |  |  |
| Secondary Liner Type  | 58# Polycoated Kraft                     | View  |
| Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first) |  |  |
| Liner Thickness   | 0.107 mm                                 |  |

|                            |          |  |
|----------------------------|----------|--|
| Primary Liner Thickness    | 0.107 mm |  |
| Secondary Liner Thickness  | 0.157 mm |  |
| Total Tape Thickness (mil) | 3.6 mil  | <a href="#">View</a>  |
| Test Method: ASTM D3652    |          |  |
| Total Tape Thickness (mm)  | 0.091 mm | <a href="#">View</a>  |
| Test Method: ASTM D3652    |          |  |
| Liner Print                | 300LSE   |  |
| Liner Thickness            | 4.2 mil  |  |
| Primary Liner Thickness    | 4.2 mil  |  |
| Secondary Liner Thickness  | 6.2 mil  |  |

### Typical Performance Characteristics

| Property   | Values   | Additional Information   |
|--|----------|--|
| 90° Peel Adhesion  | 9.8 N/cm | <a href="#">View</a>  |
| Test Method: ASTM D3330<br><br>Dwell/Cure Time: 15.0<br>Dwell Time Units: min<br>Temp C: 23C<br>Temp F: 72F<br>Environmental Condition: 50%RH<br>Substrate: Stainless Steel<br>Backing: 2 mil Aluminum Foil                                      |          |  |
| 90° Peel Adhesion  | 90 oz/in | <a href="#">View</a>  |
| Test Method: ASTM D3330<br><br>Dwell/Cure Time: 15.0<br>Dwell Time Units: min<br>Temp C: 23C<br>Temp F: 72F<br>Environmental Condition: 50%RH<br>Substrate: Stainless Steel<br>Backing: 2 mil Aluminum Foil<br><br>Notes: 12 in/min (300 mm/min) |          |  |
| 90° Peel Adhesion  |          |  |

8.8 N/cm

[View](#) 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: ABS  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

80 oz/in

[View](#) 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: ABS  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

9.7 N/cm

[View](#) 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Polypropylene (PP)  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

89 oz/in

[View](#) 

Test Method: ASTM D3330

Dwell/Cure Time: 15.0  
Dwell Time Units: min  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Polypropylene (PP)  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

10.9 N/cm

[View](#) 


Test Method: ASTM D3330

Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

100 oz/in


[View](#) 

Test Method: ASTM D3330

Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH

Substrate: Stainless Steel  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

|                   |           |  |
|-------------------|-----------|--|
| 90° Peel Adhesion | 12.4 N/cm | View  |
|-------------------|-----------|--|

Test Method: ASTM D3330

Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: ABS  
Backing: 2 mil Aluminum Foil


Notes: 12 in/min (300 mm/min)

|                   |           |  |
|-------------------|-----------|--|
| 90° Peel Adhesion | 113 oz/in | View  |
|-------------------|-----------|--|

Test Method: ASTM D3330

Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: ABS  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

|                   |           |  |
|-------------------|-----------|--|
| 90° Peel Adhesion | 11.3 N/cm | View  |
|-------------------|-----------|--|

Test Method: ASTM D3330

Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Polypropylene (PP)  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

|                   |           |  |
|-------------------|-----------|--|
| 90° Peel Adhesion | 103 oz/in | View  |
|-------------------|-----------|--|


Test Method: ASTM D3330

Dwell/Cure Time: 72.0  
Dwell Time Units: hr  
Temp C: 23C  
Temp F: 72F  
Environmental Condition: 50%RH  
Substrate: Polypropylene (PP)  
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

|                                   |        |  |
|-----------------------------------|--------|--|
| Short Term Temperature Resistance | 300 °F |  |
|-----------------------------------|--------|--|


|                                   |        |  |
|-----------------------------------|--------|--|
| Short Term Temperature Resistance | 149 °C |  |
|-----------------------------------|--------|--|

|                  |       |  |
|------------------|-------|--|
| Long Term Temp C | 93 °C | View  |
|------------------|-------|--|

Test Condition: Long Term (day, weeks)

|  |        |  |
|--|--------|--|
| Long Term Temp F                       | 200 °F | View  |
| Test Condition: Long Term (day, weeks) |        |  |

### Available Sizes

| Property  | Values                 | Additional Information   |
|---|------------------------|--|
| Standard Sheet Size   | 24in x 36in in         | View  |
| Notes: Custom sheets are available for 3M™ Adhesive Transfer Tapes 8132LE, 8153LE |                        |  |
| Normal Slitting Tolerance   | ±0.8 mm                |  |
| Normal Slitting Tolerance   | ±1/32 in               |  |
| Minimum Slit Width  | 305 mm                 |  |
| Minimum Slit Width  | 12 in                  |  |
| Maximum Slit Width  | 1219 mm                |  |
| Maximum Slit Width  | 48 in                  |  |
| Core Size (ID)  | 152.4 mm               |  |
| Core Size (ID)  | 6 in                   |  |
| Limitations   | Maximum 360 yd (329 m) |  |

### Typical Environmental Performance

The properties defined are based on the attachment of impervious faceplate materials (such as aluminum) to a stainless steel test surface.

Bond Build-up: The bond strength of 3M™ Adhesive 300LSE increased as a function of time and temperature, and has very high initial adhesion.

Humidity Resistance: High humidity has a minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

U.V. Resistance: When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.

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, nameplates and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Temperature Resistance: 3M™ Adhesive 300LSE is usable for short periods (minutes, hours) at temperatures up to 300°F (148°C) and for intermittent longer periods of time (days, weeks) up to 200°F (93°C).

Lower Service Temperature: -40°F (-40°C).

## Processing

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Slitting and die-cutting: This adhesive is very aggressive and may be difficult to convert depending on your application requirements. Chilling the adhesive between 35°F and 50°F will improve the processability. In addition, dies can be lubricated with evaporative stamping oil. You may also refer to our Technical Bulletin on 3M™ Adhesive 300LSE converting. (70-0707-6205-2)

Roll Laminating: A combination of metal and rubber rollers with moderate pressure is recommended. Note: Please refer to the Technical Bulletin on slitting. (70-0709-3905-6)

## Storage and Shelf Life

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Store at room temperature conditions of 70°F (21°C) and 50% relative humidity.

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

## Recognition/Certification

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TSCA: These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

MSDS: These products are 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 products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

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## Automotive Disclaimer

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Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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## Bottom Matter

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3M

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## Trademarks

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3M is a trademark of 3M Company.

## Handling/Application Information

### Application Examples

- Plastic nameplates or graphic overlays for use on low surface energy plastics.
- Waste removed nameplates on a common sheet for ease of application.
- Attaching membrane switch assemblies to powder coated surfaces and low surface energy plastics.
- Graphic overlays with end tabs for easy liner removal.
- Graphic application to surfaces such as wood, fabric, plastic, where very high bond strength is required.
- Attaching identification material to lightly oily surfaces typical of machine parts.

### Application Techniques

For maximum bond strength, the surface should be thoroughly cleaned and dried. 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.

Bond strength can also be improved with firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), causing the adhesive to develop intimate contact with the bonding surface.

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 for most pressure-sensitive adhesives because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

## References

| Property              | Values  |
|-----------------------|---|
| 3m.com Product Page   | <a href="https://www.3m.com/3M/en_US/p/d/b40072019/">https://www.3m.com/3M/en_US/p/d/b40072019/</a>   |
| Safety Data Sheet SDS | <a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=8153LE">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=8153LE</a> |

## Family Group

Link Tags:

- 8132LE
- 8153LE
- 9453LE
- 9471LE
- 9472LE
- 9653LE
- 9671LE
- 9672LE

| Products | Adhesive Type                            | Liner Thickness | Long Term Temp C | Long Term Temp F | Short Term Temperature Resistance | Primary Liner Type | Liner                   | Secondary Liner Type | Total Tape Thickness (mm) |
|----------|--|-----------------|------------------|------------------|-----------------------------------|--------------------|-------------------------|----------------------|---------------------------|
| 9471LE   | 3M High Strength Acrylic Adhesive 300LSE | 0.102 mm        | 93 °C            | 200 °F           | N/A                               | N/A                | N/A                     | N/A                  | N/A                       |
| 9653LE   | 3M High Strength Acrylic Adhesive 300LSE | N/A             | 93 °C            | N/A              | N/A                               | N/A                | 83#<br>Polycoated Kraft | N/A                  | N/A                       |

|        |                         |          |       |        |        |                  |                              |                  |     |          |
|--------|-------------------------|----------|-------|--------|--------|------------------|------------------------------|------------------|-----|----------|
|        | 3M High Strength        |          |       |        |        |                  |                              |                  |     |          |
| 9671LE | Acrylic Adhesive 300LSE | 0.157 mm | 93 °C | N/A    | 149 °C | N/A              | N/A                          | N/A              | N/A | N/A      |
|        | 3M High Strength        |          |       |        |        |                  | 83#                          |                  |     |          |
| 9672LE | Acrylic Adhesive 300LSE | N/A      | 93 °C | N/A    | N/A    | N/A              | Polycoated Kraft Paper (PCK) | N/A              |     | 0.132 mm |
| 9453LE | N/A                     | 0.107 mm | 93 °C | N/A    | N/A    | N/A              | N/A                          | N/A              | N/A | N/A      |
| 8132LE | N/A                     | N/A      | N/A   | 200 °F | N/A    | N/A              | N/A                          | N/A              | N/A | N/A      |
|        |                         |          |       |        |        |                  | 58#                          |                  |     |          |
| 9472LE | N/A                     | N/A      | N/A   | N/A    | N/A    | N/A              | Polycoated Kraft Paper (PCK) | N/A              |     | N/A      |
|        |                         |          |       |        |        |                  | 83#                          | 58#              |     |          |
| 8153LE | N/A                     | N/A      | 93 °C | 200 °F | 149 °C | Polycoated Kraft | N/A                          | Polycoated Kraft |     | N/A      |

## ISO Statement

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

## Information

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