



# **Technical Data Sheet**

3M<sup>™</sup> Double Coated Tape 9456

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Product Details

# **Product Description**

3M<sup>™</sup> Double Coated Tapes with 3M<sup>™</sup> Adhesive 340 provide a combination of high initial adhesion and good shear holding power to a wide variety of materials, including many plastics and foams. These tapes are available with a thin polyester film or a tissue for dimensional stability and improved handling.

# **Product Features**

3M<sup>™</sup>Adhesive 340 is a medium-firm acrylic that provides a combination of high initial adhesion to a wide variety of

• 3M<sup>™</sup> Double Coated Tape 9456 has a tissue carrier, which adds dimensional stability for handling, while still maintaining the flexibility of a free film adhesive.

# **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**

| Attribute Name       | Test Method | Test Condition | Value              |
|----------------------|-------------|----------------|--------------------|
| Adhesive Type        |             |                | 340 Acrylic        |
| Adhesive Thickness   |             | Faceside       | 0.051 mm (2 mil) 1 |
| Adhesive Carrier     |             |                | Tissue             |
| Total Tape Thickness | ASTM D3652  |                | 0.11 mm (4.3 mil)  |
| Liner                |             |                | DK                 |
| Liner Thickness      |             |                | 0.08 mm (3.2 mil)  |

<sup>1</sup> Faceside adhesive is on the interior of the roll, exposed when unwound.

# **Typical Performance Characteristics**

Substrate: Stainless Steel Temperature: 22 °C (72 °F) Dwell Time: 72 h Backing: 2 mil Aluminum Foil

| Attribute Name     | Test Method | Value                             |
|--------------------|-------------|-----------------------------------|
| 180° Peel Adhesion | ASTM D3330  | 10.6 N/cm (97 oz/in) <sup>1</sup> |

<sup>1</sup> 12 in/min (300 mm/min)

### 90° Peel Adhesion

Backing: 2 mil Aluminum Foil Test Method: ASTM D3330

| Dwell Time | Temperature   | Test Condition | Substrate          | Value                            |
|------------|---------------|----------------|--------------------|----------------------------------|
| 15 min     | 22 °C (72 °F) |                | Stainless Steel    | 3.7 N/cm (34 oz/in) <sup>1</sup> |
| 72 h       | 22 °C (72 °F) |                | ABS                | 5 N/cm (46 oz/in) <sup>1</sup>   |
| 72 h       | 22 °C (72 °F) |                | Polycarbonate (PC) | 5.1 N/cm (47 oz/in) <sup>1</sup> |
| 72 h       | 22 °C (72 °F) |                | Polypropylene (PP) | 4.6 N/cm (42 oz/in) 1            |
| 72 h       | 22 °C (72 °F) | Acrylic Side   | Stainless Steel    | 5.2 N/cm (48 oz/in) <sup>1</sup> |

| Dwell Time | Temperature    | Test Condition | Substrate       | Value                            |
|------------|----------------|----------------|-----------------|----------------------------------|
| 72 h       | 70 °C (158 °F) |                | Stainless Steel | 5.8 N/cm (53 oz/in) <sup>1</sup> |

<sup>1</sup> 12 in/min (300 mm/min)

#### **Static Shear**

Test Method: ASTM D3654

| Temperature    | Test Condition | Value         |
|----------------|----------------|---------------|
| 22 °C (72 °F)  | 1000g          | >10,000 min 1 |
| 70 °C (158 °F) |                | >10,000 min 1 |

<sup>1</sup> 1/2 in x 1 in sample area, test terminated at 10,000 minutes

| Attribute Name                    | Value                       |
|-----------------------------------|-----------------------------|
| Short Term Temperature Resistance | 82 °C (180 °F) <sup>1</sup> |
| Long Term Temperature Resistance  | 71 °C (160 °F) <sup>2</sup> |

<sup>1</sup> Short Term (minutes, hour)

<sup>2</sup> Long Term (day, weeks)

| Attribute Name        | Value   |  |
|-----------------------|---|--|
|                       | Not recommended for high temperature, high shear          |  |
| Additional Test notes | performance applications. For such applications, please   |  |
|                       | refer to the 3M $^{\rm M}$ Adhesive 350 and 300MP product |  |
|                       | families.   |  |

# **Handling/Application Information**

#### **Application Examples**

- End Tabbing.
- Bonding fabric to rigid cardboard.
- Attaching foam to plastics.
  Closing CD chipboard mailers.

#### **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.

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 1-800-362-3550.

#### Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. When storing rolls, lay flat in a horizontal position with release treated wafers between the rolls. For best performance, use this product within 24 months from date of manufacture.

#### **Available Sizes**

| Attribute Name            | Width               | Value               |
|---------------------------|---------------------|---------------------|
| Core Size (ID)            |                     | 76.2 mm (3 in)      |
| Maximum Length            | 1/2 to 54 in widths | 329 m (360 yd)      |
| Normal Slitting Tolerance |                     | ±0.08 mm (±1/32 in) |

#### **Recognition/Certification**

**MSDS:**3M has not prepared a MSDS for these products which 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, these 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. **TSCA:**These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from

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#### Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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# **ISO Statement**

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

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