English
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Technical Data Sheet

3M™ Double Coated Tape 9731

Product Description

3M™ Double Coated Tapes 9731 has a firm, silicone pressure sensitive adhesive coated on one side of a polyester film carrier and a high performance acrylic adhesive coated on the other side of the carrier.

Product Features

- Silicone adhesive provides good bond toSilicone Rubber, strong holding power to various silicone surfaces, good temperature performance and good solvent resistance.
- 3M™ Adhesive 350 provides very high adhesion to a wide variety of materials, excellent shear holding power, high temperature resistance and excellent UV resistance.
- A thin polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.

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	Silicone Acrylic	
Adhesive Type	350 Acrylic Adhesive	View
Test Name: Faceside Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Adhesive Type	Silicone Adhesive	View
Test Name: Backside Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.		
Adhesive Carrier	Clear PET (Polyester)	
Liner	PCK PET	
Primary Liner Type	58# Polycoated Kraft	View
Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)		

Secondary Liner Type	Fluoropolymer non-Silicone	View

Notes: Inner liner is primary (stays with die-cut part); Outer liner is secondary (removed first)

Liner Thickness	0.17 mm
Primary Liner Thickness	0.17 mm
Secondary Liner Thickness	0.07 mm

Liner Color	Tan	View

Test Name: Primary

Liner Color	Clear	View

Test Name: Secondary

Adhesive Thickness	0.07 mm	View

Test Name: Backside

Notes: 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.

Carrier Thickness	0.025 mm

Total Tape Thickness (mil)	5.5 mil	View

Test Method: ASTM D3652

Total Tape Thickness (mm)	0.14 mm	View

Test Method: ASTM D3652

Adhesive Thickness	2.9 mil	View

Test Name: Backside

Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Adhesive Thickness	0.041 mm	View

Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Adhesive Thickness	1.6 mil	View

Test Name: Faceside

Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

Carrier Thickness	1 mil
Liner Print	None
Liner Thickness	4.2 mil
Primary Liner Thickness	6.6 mil
Secondary Liner Thickness	2.9 mil

Typical Performance Characteristics

Property	Values	Additional Information
180° Peel Adhesion Test Method: ASTM D3330 Test Name: 350 Acrylic Substrate: ABS	8.1 N/cm	View
180° Peel Adhesion Test Method: ASTM D3330 Test Name: 350 Acrylic Substrate: ABS	74 oz/in	View
180° Peel Adhesion Test Method: ASTM D3330 Test Name: 350 Acrylic Substrate: Polycarbonate (PC)	6.5 N/cm	View
180° Peel Adhesion Test Method: ASTM D3330 Test Name: 350 Acrylic Substrate: Polycarbonate (PC)	60 oz/in	View
180° Peel Adhesion Test Method: ASTM D3330 Test Name: 350 Acrylic Substrate: Polypropylene (PP)	4.8 N/cm	View

180° Peel Adhesion	44 oz/in	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Substrate: Polypropylene (PP)

180° Peel Adhesion	4.3 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: ABS

180° Peel Adhesion	39 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: ABS

180° Peel Adhesion	4.5 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: Polycarbonate (PC)

180° Peel Adhesion	42 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: Polycarbonate (PC)

180° Peel Adhesion	4.4 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: Polypropylene (PP)

180° Peel Adhesion	40 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone
Substrate: Polypropylene (PP)

180° Peel Adhesion	4.4 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	40 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	4.5 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	42 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	5.2 N/cm	View

Test Method: ASTM D3330

Test Name: Silicone
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70C
Temp F: 158°F
Substrate: Stainless Steel

180° Peel Adhesion	48 oz/in	View

Test Method: ASTM D3330

Test Name: Silicone
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70C
Temp F: 158F
Substrate: Stainless Steel

180° Peel Adhesion	7.7 N/cm	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	71 oz/in	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	10.1 N/cm	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	93 oz/in	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 73°F
Substrate: Stainless Steel

180° Peel Adhesion	13.2 N/cm	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70C
Temp F: 158°F
Substrate: Stainless Steel

180° Peel Adhesion	121 oz/in	View

Test Method: ASTM D3330

Test Name: 350 Acrylic
Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 70C
Temp F: 158°F
Substrate: Stainless Steel

Short Term Temperature Resistance	350 °F	View

Test Condition: Short Term (minutes, hour)

Short Term Temperature Resistance	177 °C	View

Test Condition: Short Term (minutes, hour)

Long Term Temp C	121 °C	View

Test Condition: Long Term (day, weeks)

Long Term Temp F	250 °F	View

Test Condition: Long Term (day, weeks)

Static Shear	6090 min	View

Test Method: ASTM D3654

Test Name: Faceside

Test Condition: 1000 g @ Room Temperature

Notes: 0.5 in² sample size

Static Shear	>10,000 min	View

Test Method: ASTM D3654

Test Name: Backside
Test Condition: 1000 g @ Room Temperature

Notes: 0.5 in² sample size

Static Shear	>10,000 min	View

Test Method: ASTM D3654

Test Name: Faceside
Test Condition: 500 g @ 70°C (158°F)

Notes: 0.5 in² sample size

Static Shear	>10,000 min	View

Test Method: ASTM D3654

Test Name: Backside
Test Condition: 500 g @ 70°C (158°F)

Notes: 0.5 in² sample size

Available Sizes

Property	Values	Additional Information
Note	Subject to Minimum Order Requirements	
Maximum Length	32.9 m	View

Width: 1/4 in to 3/8 in widths

Maximum Length	36 yd	View

Width: 1/4 in to 3/8 in widths

Maximum Length	98.9 mm	View

Width: 1 to 38 in

Maximum Length	108 yd	View

Width: 1 to 38 in

Minimum Available Width	6.35 mm	
Minimum Available Width	1/4 in	

Maximum Available Width	965 mm
Maximum Available Width	38 in
Normal Slitting Tolerance	±0.8 mm
Normal Slitting Tolerance	±1/32 in
Core Size (ID)	76.2 mm
Core Size (ID)	3 in

Electrical and Thermal Properties

Property	Values	Additional Information
Dielectric Strength	8000 V	View

Test Method: ASTM D1000

Notes: RMS Voltage/Thickness

Volume Resistivity	3.4 x 10^15 Ω-cm	View

Test Method: ASTM D257

Test Condition: Room Temperature

Surface Resistivity	7.4 x 10^15 Ω-cm	View

Test Method: ASTM D257

Test Name: 350 Acrylic
Test Condition: Room Temperature

Surface Resistivity	2.6 x 10^15 Ω-cm	View

Test Method: ASTM D257

Test Name: Silicone
Test Condition: Room Temperature

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.

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 these 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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Bottom Matter

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Handling/Application Information

Application Examples

● Applications where bondingSilicone Rubber to low surface energy materials is necessary.

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.*

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.

*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.

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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40071892/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9731

Family Group

Link Tags:

9731 | 9731RW | 9731-100 | 9731-050

Products	Adhesive Type	Adhesive Carrier	Liner	Primary Liner Type	Secondary Liner Type	Liner Thickness	Primary Liner Thickness	Liner Color	Carrier Thickness	Total Tape Thickness (mm)	Long Term Temp C	Long Term Temp F	Short Term Temperature Resistance	Secondary Liner Thickness	Adhesive Thickness
9731	Silicone Adhesive	Clear PET (Polyester)	PCK	58# Polycoated Kraft	Fluoropolymer non-Silicone	0.17 mm	0.17 mm	Clear	0.025 mm	0.14 mm	121 °C	250 °F	N/A	N/A	N/A
9731-100	350 Acrylic Adhesive	N/A	PCK	58# Polycoated Kraft	N/A	N/A	0.074 mm	N/A	N/A	0.1 mm	93 °C	N/A	177 °C	0.107 mm	0.053 mm
9731-050	Silicone Adhesive	Clear PET (Polyester)	N/A	58# Polycoated Kraft	Fluoropolymer non-Silicone	N/A	N/A	Clear	0.014 mm	0.05 mm	N/A	200 °F	N/A	0.107 mm	N/A
9731RW	350 Acrylic Adhesive	Clear PET (Polyester)	N/A	Fluoropolymer non-Silicone	N/A	0.07 mm	0.07 mm	Clear	0.025 mm	0.14 mm	121 °C	250 °F	N/A	N/A	0.07 mm

ISO Statement

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

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