

May, 2011

3M™ Double Coated Tape 9456

Product Description

3M™ Double Coated Tapes with 3M™ 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™ Adhesive 340 is a medium-firm acrylic that provides a combination of high initial adhesion to a wide variety of materials, including many plastics.
- 3M™ 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

Property	Values		Attribute Modifier	Notes
Total Tape Thickness without liner	0.11 mm	4.3 mil		
Adhesive Type	340		Faceside	Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.
Adhesive Type	340		Backside	Backside adhesive is on the exterior of the roll, exposed when liner is removed.
Adhesive Carrier	Tissue			

Adhesive Thickness		Attribute Modifier	Notes
0.051 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.
2 mil		Backside	Backside adhesive is on the exterior of the roll, exposed when liner is removed.
0.051 mm	2 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	Dwell Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
Additional Test notes	Not recommended for high temperature, high shear performance applications. For such applications, please refer to the 3M™ Adhesive 350 and 300MP product families.											
Relative High Temperature Operating Ranges	180 °F		Short Term (minutes, hours)									
Relative High Temperature Operating Ranges	150 °F		Long Term (days, weeks)									

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Typical Performance Characteristics (continued)

Property	Values		Test Condition	Method	Notes	Dwell Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
Static Shear	>10,000 min		1000 g @ Room Temperature	ASTM D3654	0.5 in² sample size							
Static Shear	>10,000 min		500 g @ 70°C (158°F)	ASTM D3654	0.5 in² sample size							
180° Peel Adhesion	10.6 N/cm	97 oz/in		ASTM D3330	12 in/min (300 mm/min)	72	hr	22C	72F	52%RH	Stainless Steel	Aluminum Foil

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Substrate	Backing
53 oz/in	5.8 N/cm	72	hr	70C	158F	Stainless Steel	2 mil Aluminum Foil
5 N/cm	46 oz/in	72	hr	22C	72F	ABS	2 mil Aluminum Foil
4.6 N/cm	42 oz/in	72	hr	22C	72F	Polypropylene (PP)	2 mil Aluminum Foil
5.1 N/cm	47 oz/in	72	hr	22C	72F	Polycarbonate (PC)	2 mil Aluminum Foil
48 oz/in	5.2 N/cm	72	hr	22C	72F	Stainless Steel	2 mil PET
3.7 N/cm	34 oz/in	15	min	22C	72F	Stainless Steel	2 mil PET

Property: 90° Peel Adhesion
Method: ASTM D3330
Environmental Condition: 52%RH
notes: 12 in/min (300 mm/min)

Available Sizes

Property	Values		Width	Attribute Modifier
Maximum Length	329 m	360 yd	1/2 to 54 in widths	
Normal Slitting Tolerance	±0.08 mm	±1/32 in		
Core Size	76.2 mm	3 in		ID

Handling/Application Information

Application Ideas

- End Tabbings.
- 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

It is best to use the rolls as soon as possible after receipt. Ideally, rolls should be laminated to the intended substrates as soon after receipt as possible. Store in original cartons at 70°F (21°C) and 50% relative humidity. When storing rolls, lay them flat in a horizontal position with release treated wafers between the rolls.

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/company-us/all-3m-products/-/3M-Double-Coated-Tissue-Tape-9456?N=5002385+3293240978&rt=rud
Safety Data Sheet (SDS)	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9456

Family Group

	9824	9828	9828HL	9828PC	9456
Adhesive Thickness (mm) Attribute Modifier: Faceside	0.032	0.051	0.051	0.051	0.051

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3M™ Double Coated Tape 9456

Family Group (continued)

	9824	9828	9828HL	9828PC	9456
Adhesive Thickness (mm) Attribute Modifier: Backside	0.032	0.038	0.038	0.038	0.051
Adhesive Type Attribute Modifier: Faceside	340	340	340	340	340
Adhesive Type Attribute Modifier: Backside	340	340	340	340	340
Total Tape Thickness without liner (mm)	0.058	0.084	0.084	0.084	0.11
Adhesive Carrier	Clear PET (Polyester)	Clear PET (Polyester)	Clear PET (Polyester)	Clear PET (Polyester)	Tissue

ISO Statement

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

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 inventory listing requirements.

Information

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