



Low VOC Tapes with Acrylic Adhesive

98010LVC • 99015LVC

Preliminary Technical Data Sheet

April 2016

Product Description

3M™ Low VOC Tapes with Acrylic Adhesive 98010LVC and 99015LVC are designed for automotive interior applications on commonly used foam substrates, such as PU Ester and EPDM, as well as high surface energy (HSE) and low surface energy (LSE) substrates. The pure acrylic adhesive on both thin bonding tapes is designed to be low fog and low emission to meet the VOC requirements set forth in the JAMA and VDA278 test methods used by Automotive OEM's and tier suppliers.

98010LVC is a 3.9 mil (0.10 mm) low VOC scrim reinforced transfer tape that provides good dimensional stability for large area lamination.

99015LVC is a 5.9 mil (0.15 mm) low VOC double coated tape with tissue carrier for ease of handling during lamination and excellent die-cutting characteristics.


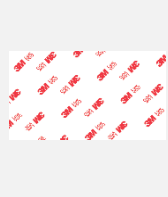
Construction Information



3M™ Low VOC Tapes with Acrylic Adhesive

98010LVC, 99015LVC

Construction Information (cont.)

Product	Adhesive Caliper mils (mm)	Liner Type	Liner Thickness mils (mm)	Liner Color and Print
98010LVC	3.9 mils (0.10 mm)	58# Densified Kraft	3.2 mils (0.08 mm)	
99015LVC	5.9 mils (0.15 mm)	58# Densified Kraft	3.2 mils (0.08 mm)	

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

Product Testing

JAMA Low VOC Results Tested by: SGS Institut Fresenius GmbH

Substance	98010LVC Measured VOC (µg/specimen)	99015LVC Measured VOC (µg/specimen)	VOC Targets (µg/specimen)
Formaldehyde	0.12	0.08	<0.3
Acetaldehyde	0.04	0.04	<0.3
Toluene	0.08	0.05	<0.3
Ethylbenzene	<0.04	<0.04	<0.3
Xylene (o-,m-,p-)	<0.04	<0.04	<0.7
Styrene	<0.04	<0.04	<0.3
Tetradecane	<0.04	<0.04	Report
Di-n-butyl phthalate	<0.04	<0.04	Report
Di-2-ethylhexyl phthalate	<0.04	<0.04	Report
Benzene	N/A	N/A	N/A
Acrolein	N/A	N/A	N/A

Test method:
 Sample Size: 100mmx100mm
 Heating condition: 149°F (65°C) for 2 hours
 Gas trapping volume: 4L with Tedlar bag (10L)
 Absorption pipe: Tenax-TA (for volatile carbon oxide), DNPH cartridge (for aldehydes)
 Absorb air in Tedlar bag with each absorption pipe after heating and measure with gas chromatograph mass spectrometer or high speed liquid chromatography

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Product
Testing

VDA 278 Test Results

Tested by: SGS Institut Fresenius GmbH

	98010LVC	99015LVC
Test Parameter	Measured value (µg/g)	
VOC	16	18
	15	13
FOG	89	110

Typical
Physical
Properties and
Performance
Characteristics

- I. Adhesion Peel: ASTM D-3330 (Modified: 2 mil aluminum foil backer)
Peel Speed = 12 ipm (300 mm/min)
- a. **Metal (Stainless Steel)**

Product	20 minute dwell		72 hour dwell @ 158°F/70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	40 oz/in 11 N/25 mm	80 oz/in 22 N/25 mm	106 oz/in 29 N/25 mm	79 oz/in 22 N/25 mm
99015LVC	55 oz/in 15 N/25 mm	121 oz/in 34 N/25 mm	129 oz/in 36 N/25 mm	112 oz/in 31 N/25 mm

- b. **Polypropylene**

Product	20 minute dwell		72 hour dwell @ 158°F/70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	18 oz/in 5 N/25 mm	17 oz/in 4 N/25 mm	18 oz/in 5 N/25 mm	16 oz/in 4 N/25 mm
99015LVC	24 oz/in 7 N/25 mm	24 oz/in 7 N/25 mm	19 oz/in 5 N/25 mm	25 oz/in 7 N/25 mm

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c. ABS

Product	20 minute dwell		72 hour dwell @ 158°F/70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	14 oz/in 4 N/25 mm	35 oz/in 10 N/25 mm	49 oz/in 14 N/25 mm	46 oz/in 13 N/25 mm
99015LVC	18 oz/in 5 N/25 mm	124 oz/in 34 N/25 mm	67 oz/in 19 N/25 mm	126 oz/in 35 N/25 mm

d. Polycarbonate

Product	20 minute dwell		72 hour dwell @ 158°F / 70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	59 oz/in 16 N/25 mm	94 oz/in 26 N/25 mm	56 oz/in 16 N/25 mm	91 oz/in 25 N/25 mm
99015LVC	87 oz/in 24 N/25 mm	128 oz/in 36 N/25 mm	42 oz/in 12 N/25 mm	128 oz/in 36 N/25 mm

II. Static Shear Strength (minutes), ASTM D-3654

Size: 1" x 1"
Weight: 500 grams

	Dwell 24hr @ room temp (tested at 70°C/158°F)	
	98010LVC	99015LVC
SS	10,000	10,000

III. Fogging (Photometric method)

The effect of fogging condensate on the glass plate is determined by measuring the 60° specular gloss. The 60° specular gloss for the same glass plate that is free from fogging condensate and carefully cleaned before the test is used as a reference value. The higher value indicates less fogging.

	Testing Results			
	98010LVC		99015LVC	
	1 hour	16 hours	1 hour	16 hours
SAEJ1756	92%	94%	97%	98%

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Environmental Performance

Humidity Resistance – High humidity has a minimal effect on adhesive performance. Bond strength (is generally higher/shows no significant reduction) after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

Bond Build-up - The bond strength of 3M™ Low VOC Adhesive increases as a function of time and temperature on high energy surfaces.

Application Ideas

- Automotive interior bonding
- Door trim and door bolster attachment
- Foam, flock and felt for BSR applications
- Gaskets and seals
- Headliner component and shade attachment
- Acoustic/Thinsulate™ attachment

Master Width

Product	Master Width Sizes
98010LVC	1000mm, 1372mm, 1500mm
99015LVC	1000mm, 1372mm, 1500mm

More sizes may be available. Please call 800-362-3550 or talk to your local 3M representative for more information.

Storage

It is suggested that products are stored at room temperature conditions of 70°F (21°C) and 50% relative humidity. Out of direct sunlight.

Shelf Life

If stored properly, product retains its performance and properties for 18 months from date of shipment.

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Recognition/Certification

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements

MSDS: 3M has not prepared a MSDS for this product which is not subjected 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, this 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.

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Technical Information

The technical information and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed. It has been prepared from testing that was performed using standard test methods, and tested equipment that is calibrated in compliance to ISO9001 and operated by trained professionals in controlled environments. The data should be considered representative or typical only and should not be used for specification purposes.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluation of the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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ISO 9001

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



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