



# Low VOC Tapes with Acrylic Adhesive

## 98010LVC 99015LVC

### Product Data Sheet

Date: September 2022  
Supersedes: July 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 as determined by the JAMA and VDA278 test methods used by Automotive OEM's and tier suppliers.

98010LVC is a 100 µm low VOC scrim reinforced transfer tape that provides good dimensional stability for large area lamination.  
99015LVC is a 150 µm low VOC double coated tape with tissue carrier for ease of handling during lamination and excellent die-cutting characteristics.

#### Construction Information



#### Construction Information

Product	Adhesive Caliper (mm)	Liner Type	Liner Thickness (mm)	Liner Color and Print
98010LVC	0.10 mm	90 g Densified Kraft paper	0.08 mm	
99015LVC	0.15 mm	90g Densified Kraft paper	0.08 mm	

**Product Testing**

JAMA Low VOC Results (exemplary)  
 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: 100mm×100mm  
 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

**Product Testing**

VDA 278 Test Results (exemplary)  
 Tested by: SGS Institute 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:**  
 AFERA 5001/ ASTM D-3330 (Modified: 2 mil aluminum foil backer),  
 Peel Speed = 300 mm/min

**a. Metal (Stainless Steel)**

Product	20 min dwell		72 hours dwell @ 70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	11 N/25 mm	22 N/25 mm	29 N/25 mm	22 N/25 mm
99015LVC	15 N/25 mm	34 N/25 mm	36 N/25 mm	31 N/25 mm

**b. Polypropylene**

Product	20 min dwell		72 hours dwell @ 70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	5 N/25 mm	4 N/25 mm	5 N/25 mm	4 N/25 mm
99015LVC	7 N/25 mm	7 N/25 mm	5 N/25 mm	7 N/25 mm

**c. ABS**

Product	20 min dwell		72 hours dwell @ 70°C	
	90° Peel	180° Peel	90° Peel	180° Peel
98010LVC	4 N/25 mm	10 N/25 mm	14 N/25 mm	13 N/25 mm
99015LVC	5 N/25 mm	34 N/25 mm	19 N/25 mm	35 N/25 mm

**Temperature Resistance**

Long term (days, weeks): 90°C  
 Short term (minutes, hours): 120°C

**Typical Physical Properties and Performance Characteristics**

**II. Static Shear Strength (minutes), ASTM D-3654**  
 Size: 25mm x 25 mm  
 Weight: 500 grams

Dwell time: 24hr @ RT (tested at 70°C)		
	98010LVC	99015LVC
SS	10,000	10,000

**Static Shear Strength (minutes), ASTM D-3654**

Size: 25mm x 25 mm  
 Weight: 300 grams

Dwell time: 24hr @ RT (tested at 90°C)		
	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 60o specular gloss. The 60o 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%

**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 32°C and 90% relative humidity.

Bond Build-up - The bond strength of 3M™ Low VOC tape 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

---

**Storage & Shelf Life**

Store at 16-25 °C and 40-65 % relative humidity in original carton out of sunlight.

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

---

**Precautionary Information**

To request additional product information or to arrange for sales assistance, call.....

Address correspondence to: 3M

---

**For Additional Information**

To request additional product information or to arrange for sales assistance, call.....

Address correspondence to: 3M

---

**Automotive Disclaimer**

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.

---

NOTWITHSTANDING ANY OTHER STATEMENT TO THE CONTRARY, 3M MAKES NO REPRESENTATIONS, WARRANTIES OR CONDITIONS WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCT IF USED IN AN AUTOMOTIVE ELECTRIC POWERTRAIN BATTERY OR HIGH VOLTAGE APPLICATION, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY ON PERFORMANCE, LONGEVITY, SUITABILITY, COMPATIBILITY, OR INTEROPERABILITY, OR ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE.

---

### Important Notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law

---

Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

---

3M is a trademark the 3M Company.

**3M United Kingdom PLC**  
2M Centre, Cain Road, Bracknell  
RG12 8HT  
United Kingdom

**3M Svenska AB**  
Herrjärva torg 4  
170 67 Solna  
Sweden

**3M Eesti OÜ**  
Pärnu mnt. 158  
11317 Tallinn  
Estonia

**3M Ireland Ltd**  
The Iveagh Building, 3rd Floor  
The Park, Carrickmines 18  
Ireland

**3M a/s**  
Hannemanns Allé 53  
DK-2300 Copenhagen S.  
Denmark

**3M Latvia SIA**  
K.Ulmaņa gatve 5  
Rīga, LV-1004  
Latvia

**3M Belgium bvba/sprl**  
Hermeslaan 7  
1831 Diegem  
Belgium

**3M Norge AS**  
Tærudgata 16  
2004 Lillestrøm  
Norway

**3M Lietuva UAB**  
A.Goštauto g. 40  
Vilnius LT- 03163  
Lithuania

**3M Nederland B.V.**  
Molengraaffsingel 29  
2629 JD Delft  
The Netherlands

**Suomen 3M Oy**  
Keilaranta 6  
02150 Espoo  
Finland