



3M Science.
Applied to Life.™

**Improving vehicle air quality.
Enhancing global design flexibility.**

**Thin Attachment Automotive Solutions:
3M™ Low VOC Tapes with Acrylic Adhesive**

JAMA

The Japanese Automobile Manufacturers Association (JAMA) along with the Japanese Ministry of Health, Labor and Welfare have established target values for nine substances with defined limits for vehicle indoor air quality (VIAQ). 3M™ Low VOC Tapes with Acrylic Adhesive are designed and engineered to meet the target values set forth by each OEM.*

SUBSTANCE	98010LVC VOC (µg/specimen)	99015LVC VOC (µg/specimen)	Result
Formaldehyde	0.12	0.08	✓ PASS
Acetaldehyde	0.04	0.04	✓ PASS
Toluene	0.08	0.05	✓ PASS
Ethylbenzene	<0.04	<0.04	✓ PASS
Xylene (o-, m-, p-)	<0.04	<0.04	✓ PASS
Styrene	<0.04	<0.04	✓ PASS
Tetradecane	<0.04	<0.04	✓ PASS
Di-n-butyl phthalate	<0.04	<0.04	✓ PASS
Di-2-ethylhexyl phthalate	<0.04	<0.04	✓ PASS

VDA 278

The German Association of the Automotive Industry (*Verband der Deutschen Automobilindustrie*) has developed a test method, VDA 278, by which VOC and FOG emissions are measured. 3M™ Low VOC Tapes with Acrylic Adhesive are designed and engineered to meet the target values set forth by each OEM.*

98010LVC

Test Parameter	Emission Values	Measured Value in PPM (µg/g)	Result
VOC	total emission	16	✓ PASS
	second value	15	✓ PASS
FOG	total emission	89	✓ PASS

99015LVC

Test Parameter	Emission Values	Measured Value in PPM (µg/g)	Result
VOC	total emission	18	✓ PASS
	second value	13	✓ PASS
FOG	total emission	110	✓ PASS

*The above data should be considered representative or typical and was performed by a third-party, independent certified laboratory according to the test methods outlined in the standard. Please refer to the target values and guidelines set forth by the individual OEM or government entity to determine fit for application.

Expand your design freedom with 3M™ Low VOC Tapes with Acrylic Adhesive for automotive interiors.

Increasing government regulations around indoor air quality in passenger vehicles and more stringent automotive OEM standards are driving global demand for a new generation of low VOC (Volatile Organic Compound) thin attachment solutions. With more than 100 years of global experience and partnerships across the automotive value chain, 3M puts you in the driver's seat with a portfolio of high performance, low VOC tape solutions that meet demanding global requirements.

3M™ Low VOC Tapes with Acrylic Adhesive are engineered to expand your design freedom, so you can focus on the fit and finish of your interior, while meeting vehicle indoor air quality (VIAQ) standards. The need for more innovative new materials to reduce weight, increase passenger comfort or create a quieter cabin experience should drive your design thinking, not the emissions content of your components or attachment methods.

3M™ Low VOC Scrim Reinforced Transfer Tape 98010LVC and 3M™ Low VOC Double Coated Tissue Tape 99015LVC are designed to meet the emission standards as measured by both JAMA and VDA 278. These highly engineered tapes are designed for automotive interior bonding and provide excellent dimensional stability during lamination, making them ideal for virtually any automotive interior application, including:

- **Headliner components**
- **Seat heaters and sensors**
- **Nameplates and emblems**
- **Cup holder inserts**
- **Instrument panels and dash**
- **Interior door panels**
- **Armrests and center consoles**
- **Decorative trim**
- **Electrical components**
- **Acoustic attachment**





Roller blinds and shade protection



Storage and compartments



Carpet and floor liners



Ventilation ducts and gaskets



**3M™ Thinsulate™ Attachment
(NVH reduction and BSR prevention)**



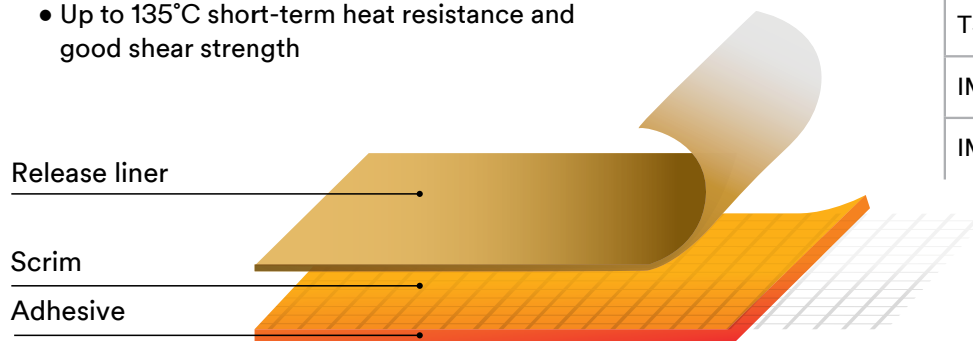
Door trim and bolsters



3M™ Low VOC Scrim Reinforced Transfer Tape 98010LVC

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

- Low VOC and Low FOG acrylic adhesive
- Designed to meet JAMA and VDA 278 automotive test methods and industry standards
- Up to 135°C short-term heat resistance and good shear strength



PRODUCT DETAILS

Adhesive caliper: 3.9 mils (0.10 mm)

Liner: 58 lb white densified kraft, printed Low VOC

TS 16949 Certification

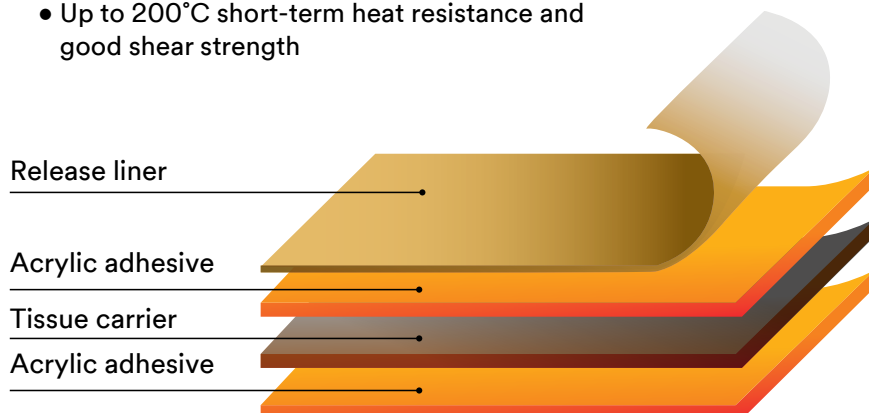
IMDS Type: Semi-component

IMDS ID: 585846337

3M™ Low VOC Double Coated Tissue Tape 99015LVC

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.

- Low VOC and Low FOG acrylic adhesive
- Designed to meet JAMA and VDA 278 automotive test methods and industry standards
- Up to 200°C short-term heat resistance and good shear strength



PRODUCT DETAILS

Adhesive caliper: 5.9 mils (0.15 mm)

Liner: 58 lb white densified kraft, printed Low VOC

TS 16949 Certification

IMDS Type: Semi-component

IMDS ID: 506790732

3M™ Low VOC Scrim Reinforced Transfer Tape 98010LVC

STOCK#	SIZE	PACKAGING
UU-0042-4589-8	1000 mm x 200 m	6 rolls/pallet
UU-0042-4588-0	1000 mm x 50 m	24 rolls/pallet
UU-0043-7489-6	1372 mm x 200 m	6 rolls/pallet
UU-0043-7490-4	1372 mm x 50 m	24 rolls/pallet
UU-0042-4673-0	1500 mm x 200 m	6 rolls/pallet
UU-0042-4662-3	1500 mm x 50 m	24 rolls/pallet

3M™ Low VOC Double Coated Tissue Tape 99015LVC

STOCK#	SIZE	PACKAGING
UU-0042-4665-6	1000 mm x 200 m	6 rolls/pallet
UU-0042-4664-9	1000 mm x 50 m	24 rolls/pallet
UU-0043-7488-8	1372 mm x 200 m	6 rolls/pallet
UU-0043-7492-0	1372 mm x 50 m	24 rolls/pallet
UU-0042-4666-4	1500 mm x 200 m	6 rolls/pallet
UU-0042-4663-1	1500 mm x 50 m	24 rolls/pallet

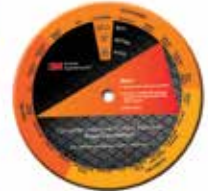


Refer to 3M.com/regs for regulatory and chemical of interest certification.

Refer to 3M.com/SDS for article information sheet.



Increasingly stringent regulations concerning indoor air quality and more stringent automotive OEM standards are driving the market need for low VOC, thin attachment solutions for automotive interior applications.



Use 3M's Automotive Thin Attachment Solutions Brochure, Foam Lamination Brochure, Foam Lamination Selector Board and Foam Lamination Product Selector Wheel to help you quickly choose the right product for your application.

For more information about 3M™ Low VOC Tapes with Acrylic Adhesive go to 3Mconvertersolutions.com. Contact your local 3M representative or authorized converter for additional details on the Go-To Materials List for automotive applications.

Warranty, Limited Remedy, and Disclaimer: 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. User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



Converter Markets
Industrial Adhesives and Tapes Division
 3M Center
 Building 225-3S-06
 St. Paul, MN 55144-1000

Phone 1-800-362-3550
 Web 3M.com/IATD

Automotive Market Center
 19460 Victor Pkwy
 Livonia, MI 48152-1061

Phone 1-877-266-1105
 Web 3M.com/AutoSolutions



3M and Thinsulate are trademarks of 3M Company.
 Please recycle. Printed in USA © 3M 2016.
 All rights reserved. 70-0713-4616-0