



Technical Data Sheet

3M™ Low VOC Adhesive Transfer Tape
59812LVC



[Regulatory Info/SDS](#)

Product Description

3M™ Low VOC Adhesive Transfer Tape 59812LVC is engineered for bonding performance on a wide variety of substrates including metal, plastic, foam, and fabric substrates, while also having Low Volatile Organic Compound emissions.

- Pressure sensitive adhesive bonding performance suitable for Polypropylene, PC, ABS, PU Foam, crushed EPDM and many other substrates.
- Low Fog – Tested to SAEJ1756 Standard
- Tested to JASO M902 (JAMA) VOC Standard
- Tested to VDA methodology for low Volatile Organic Content, Fogging and Odor requirements.

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

Attribute Name	Test Method	Value
Adhesive Type		Acrylic
Total Tape Thickness	ASTM D3652	0.13 mm (5.2 mil)
Liner		58# Brown PCK
Liner Print		3M Low VOC

Typical Performance Characteristics

180° Peel Adhesion

Temperature: 23 °C (73 °F)

Dwell Time: 72 h

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Substrate	Value
Stainless Steel	9.8 N/cm (89 oz/in) ¹
Polypropylene (PP)	10.4 N/cm (95.2 oz/in) ¹
ABS	10.5 N/cm (96.2 oz/in) ¹

¹ 300 mm/min (12 in/min)

90° Peel Adhesion

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Dwell Time	Temperature	Substrate	Value
20 min	23 °C (73 °F)	Stainless Steel	7.0 N/cm (64 oz/in) ¹
20 min	23 °C (73 °F)	Polypropylene (PP)	5.2 N/cm (48 oz/in) ¹
20 min	23 °C (73 °F)	ABS	8.7 N/cm (79 oz/in) ¹
72 h	23 °C (73 °F)	Stainless Steel	9.0 N/cm (82 oz/in) ¹

Dwell Time	Temperature	Substrate	Value
72 h	23 °C (73 °F)	Polypropylene (PP)	8.3 N/cm (76 oz/in) ¹
72 h	23 °C (73 °F)	ABS	10.3 N/cm (94.4 oz/in) ¹
72 h	70 °C (158 °F)	Stainless Steel	10.5 N/cm (95.8 oz/in) ¹
72 h	70 °C (158 °F)	Polypropylene (PP)	7.0 N/cm (64 oz/in) ¹
72 h	70 °C (158 °F)	ABS	8.3 N/cm (76 oz/in) ¹

¹ 300 mm/min (12 in/min)

Substrate: Stainless Steel
Temperature: 23 °C (73 °F)
Test Condition: 1000 g
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil

Attribute Name	Test Method	Value
Static Shear	ASTM D3654	10,000 min ¹

¹ 25 x 25 mm (1 in x 1 in) sample area, test terminated after 10,000 minutes

Substrate: Stainless Steel
Test Method: ASTM D3654

Attribute Name	Test Condition	Value
Long Term Temperature Resistance	200 g	121 °C (250 °F) ¹
Short Term Temperature Resistance	200 g	149 °C (300 °F) ²
Long Term Temperature Resistance	500 g	93 °C (200 °F) ¹
Short Term Temperature Resistance	500 g	121 °C (250 °F) ²

¹ Maximum temperature where tape supports indicated load per 6.5cm² (1 in²) in static shear for 10,000 minutes.

² Maximum temperature where tape supports indicated load per 6.5cm² (1 in²) in static shear for 60 minutes.

T-Peel Adhesion

Temperature: 23 °C (73 °F)
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D1876

Substrate	Value
Polyether Urethane Foam	Foam Tear ¹
EPDM	Foam Tear ¹
Microcellular Urethane	Foam Tear ¹

¹ Failure mode

Typical Environmental Performance

The emissions testing was performed on tape samples by a 3rd party to characterize VOC, Fog and Odor

Attribute Name	Test Method	Value
VOC/Fog Emissions Analysis	VDA 278 (Total VOC)	131 µg/g
VOC/Fog Emissions Analysis	VDA 278 (Total SVOC)	474 µg/g
Formaldehyde Analysis	VDA 275	1.4 µg/g
Odor Analysis	VDA 270	3
Fogging (photometric method)	SAE J1756	96 %

VOC Emissions Analysis

Test Method: JASO M902 (JAMA)

Test Condition	Value
Formaldehyde	0.08 µg
Acetaldehyde	<0.27 µg
Toluene	1.11 µg
Xylene (m-,p-,o-)	<0.22 µg
Ethyl Benzene	<0.07 µg
Styrene	<0.08 µg
p-dichlorobenzene	<0.07 µg

90° Peel Adhesion

Temperature: 32 °C (90 °F)

Dwell Time: 72 h

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Environmental Condition: 90 %RH

Substrate	Value
Stainless Steel	9.9 N/cm (91 oz/in) ¹
Polypropylene (PP)	8.5 N/cm (78 oz/in) ¹
ABS	9.2 N/cm (84 oz/in) ¹

¹ 300 mm/min (12 in/min)

Handling/Application Information

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). *Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Information

Intended Use: This product is intended for bonding of materials specified and described in its Technical Data Sheet, when used in accordance with the guidance provided by 3M in such Technical Data Sheet and other product instructions. Since there are many factors that can affect a product's use, the customer remains responsible for determining whether the 3M product is suitable and appropriate for the customer's specific application and system, including customer conducting an appropriate risk assessment and evaluating the 3M product in customer's application and system.

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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