



Technical Data Sheet

3M™ Double Coated Tissue Tape 56412



[Product Details](#)

Product Description

3M™ Double Coated Tissue Tape 56412 is a high tack, multipurpose tape engineered to provide durable bonds to a variety of materials, including low surface energy plastics – even at low temperatures. Target applications include Plastics Assembly, Dissimilar Material Bonding, Durable Graphic Bonding, Foam Lamination and Bonding, and Packaging and Paper Bonding.

Product Features

- High initial tack - quick stick for fast and secure bonding
- Excellent low temperature performance
- Reworkable - resists tissue splitting when peeled or removed
- Translucent tape
- Conformable tape holds to curved and uneven surfaces
- Made via a solvent-free adhesive coating process

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 Carrier		Translucent Tissue
Carrier Thickness		0.033 mm (1.3 mil)
Total Tape Thickness	ASTM D3652	0.12 mm (4.7 mil)
Liner		PCK
Liner Thickness		0.135 mm (5.3 mil)
Primary Liner Color		White

Typical Performance Characteristics

180° Peel Adhesion

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Dwell Time	Temperature	Substrate	Value
20 min	23 °C (73 °F)	Stainless Steel	5.8 N/cm (53.0 oz/in) ¹
72 h	23 °C (73 °F)	Stainless Steel	7.5 N/cm (68.3 oz/in) ¹
72 h	70 °C (158 °F)	Stainless Steel	9.1 N/cm (83.1 oz/in) ¹
20 min	23 °C (73 °F)	Polypropylene (PP)	7.1 N/cm (65.1 oz/in) ¹
72 h	23 °C (73 °F)	Polypropylene (PP)	9.6 N/cm (87.3 oz/in) ¹
72 h	70 °C (158 °F)	Polypropylene (PP)	6.5 N/cm (59.5 oz/in) ¹
20 min	23 °C (73 °F)	Polycarbonate (PC)	7.7 N/cm (70.1 oz/in) ¹
72 h	23 °C (73 °F)	Polycarbonate (PC)	7.6 N/cm (69.8 oz/in) ¹
72 h	70 °C (158 °F)	Polycarbonate (PC)	8.6 N/cm (78.1 oz/in) ¹
20 min	23 °C (73 °F)	ABS	2.9 N/cm (26.2 oz/in) ¹
72 h	23 °C (73 °F)	ABS	4.3 N/cm (39.4 oz/in) ¹

Dwell Time	Temperature	Substrate	Value
72 h	70 °C (158 °F)	ABS	9.0 N/cm (81.9 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	5.3 N/cm (48.6 oz/in) ¹
72 h	23 °C (73 °F)	Stainless Steel	6.2 N/cm (56.8 oz/in) ¹
72 h	70 °C (158 °F)	Stainless Steel	7.5 N/cm (68.7 oz/in) ¹
20 min	23 °C (73 °F)	Polypropylene (PP)	5.3 N/cm (48.4 oz/in) ¹
72 h	23 °C (73 °F)	Polypropylene (PP)	7.0 N/cm (63.6 oz/in) ¹
72 h	70 °C (158 °F)	Polypropylene (PP)	4.7 N/cm (42.5 oz/in) ¹
20 min	23 °C (73 °F)	Polycarbonate (PC)	6.0 N/cm (54.8 oz/in) ¹
72 h	23 °C (73 °F)	Polycarbonate (PC)	7.6 N/cm (69.8 oz/in) ¹
72 h	70 °C (158 °F)	Polycarbonate (PC)	6.9 N/cm (62.6 oz/in) ¹
20 min	23 °C (73 °F)	ABS	2.7 N/cm (24.6 oz/in) ¹
72 h	23 °C (73 °F)	ABS	4.1 N/cm (37.2 oz/in) ¹
72 h	70 °C (158 °F)	ABS	6.0 N/cm (54.6 oz/in) ¹

¹ 300 mm/min (12 in/min)

Static Shear

Substrate: Stainless Steel
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D3654

Temperature	Test Condition	Value
23 °C (73 °F)	1000 g	10,000 min ¹
70 °C (158 °F)	500 g	10,000 min ¹

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

Attribute Name	Value
Long Term Temperature Resistance	70 °C (158 °F) ¹
Short Term Temperature Resistance	121 °C (250 °F) ²
Long Term Temperature Resistance	121 °C (250 °F) ³

¹ Maximum temperature where tape supports 500g load per 6.5cm² (1 in²) in static shear for 10,000 minutes.

² Maximum temperature where tape supports 500g load per 6.5cm² (1 in²) in static shear for 60 minutes.

³ Maximum temperature where tape supports 200g load per 6.5cm² (1 in²) in static shear for 10,000 minutes.

T-Peel Adhesion

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

Substrate	Value
EPDM	Foam Tear ¹
Polyester Urethane Foam	Foam Picking ¹

Substrate	Value
Cross-linked Polyethylene Foam	Foam Picking ¹

¹ Failure mode

Typical Environmental Performance

Temperature: 32 °C (90 °F)

Dwell Time: 72 h

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Environmental Condition: 90 %RH

Attribute Name	Substrate	Value
180° Peel Adhesion	Stainless Steel	7.1 N/cm (64.5 oz/in) ¹
90° Peel Adhesion	Stainless Steel	6.3 N/cm (57.3 oz/in) ¹
180° Peel Adhesion	Polypropylene (PP)	9.5 N/cm (86.9 oz/in) ¹
90° Peel Adhesion	Polypropylene (PP)	6.8 N/cm (62.2 oz/in) ¹
180° Peel Adhesion	Polycarbonate (PC)	8.7 N/cm (79.0 oz/in)
90° Peel Adhesion	Polycarbonate (PC)	6.0 N/cm (54.8 oz/in)
180° Peel Adhesion	ABS	4.6 N/cm (41.7 oz/in) ¹
90° Peel Adhesion	ABS	3.9 N/cm (35.5 oz/in) ¹

¹ 300 mm/min (12 in/min)

Electrical and Thermal Properties

Attribute Name	Test Method	Value
Glass Transition Temperature (Tg)	ASTM E1356	-46 °C (-51 °F) ¹

¹ Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 4 °C per minute. First heat values given.

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.

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and 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. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 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, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 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 for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

ISO Statement

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

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M is a trademark of 3M Company.
©3M 2025 (1/25)