

August, 2011

## 3M™ Hook and Loop Fastener Trial Bag TB3526N / TB3527N

### Product Description

3M™ Hook and Loop Fasteners consist of hooks and loops which engage to form a quick fastening attachment and offer advanced closure alternatives to zippers, screws, snaps, hooks, etc. They offer greater design flexibility, faster product assembly, smoother and cleaner exterior surfaces and improved product performance in many applications by simply pulling the strips apart by hand to disengage.

The woven nylon hook backing has flexible, self-supporting inverted J-hooks protruding up from the backing. There are approximately 300 hooks per square inch (46 hooks/cm<sup>2</sup>). The woven nylon loop backing has thousands of soft, pliable napped loops protruding above the backing, providing for thousands of openings and closings (cycles). The hook and loop are preshrunk to insure maximum dimensional stability and flatness. Available in black.

3M™ Hook and Loop Fasteners TB3526N/TB3527N hook and loop fasteners are coated on the backside with a high performance rubber based pressure sensitive adhesive. This permits these fasteners to be easily and conveniently attached to a variety of substrates.



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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

Thickness		Test Condition
TB3526N: 2.4 mm, TB3527N: 3.2 mm	TB3526N: 91 mil, TB3527N: 125 mil	Unmated
3.6 mm	140 mil	Engaged

Property: Thickness

Property	Values	
Full Roll Product Number 3M™ Fasteners	SJ3526N Hook & SJ3527N Loop	
Backing	High Performance Rubber PSA	
Liner	Polyethylene with red “3M”	
Liner Thickness	0.08 mm	3 mil
Liner Color	White	

Material

Hook - Woven Nylon  
Loop - Woven Nylon

Typical Performance Characteristics

Property	Values		Substrate	Notes
Dynamic Tensile	11 lb/in²		Nylon Hook to Nylon Loop	
Dynamic Shear	22 lb/in²		Nylon Hook to Nylon Loop	
Cleavage Strength	13.1 g/cm width	7.5 lb/in width	Nylon Hook to Nylon Loop	
T-Peel Adhesion	3.5 g/cm width	2 lb/in width	Nylon Hook to Nylon Loop	Run at 12 inches per minute
90° Peel Adhesion	3.9 g/cm width	2.2 lb/in width	Nylon Hook to Nylon Loop	Run at 12 inches per minute
Cycle Life	5,000		Nylon Hook to Nylon Loop	Number of closures before losing 50% of original strength

## Typical Performance Characteristics (continued)

### Product Performance

This guide should assist you in determining which product will adhere best to your substrate for your application.

3M™ Hook and Loop Fasteners Trial Bags	Poly-propylene (29) Low Surface Energy	Poly-ethylene (31)	EVA (33)	Acrylic (38) Medium Surface Energy	PC (42)	ABS (42)	Aluminum (840) High Surface Energy	Stainless Steel (700-1100)	Temperature Resistance °F
TB3000	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle	200
TB3401 TB3402	Sewable	Sewable	Sewable	Sewable	Sewable	Sewable	Sewable	Sewable	200
TB3506 TB3507				X	X	X	X	X	158
TB3526N TB3527N	X	X	X	X	X	X	X	X	120
TB3530 TB3531	X	X	X	X	X	X	X	X	90
TB3571 TB3572				X	X	X	X	X	200
X = Typically good adhesion without the use of surface primers									

### Additional Information

notes: This guide should assist you in determining which product will adhere best to your substrate for.

## Design Considerations

As a general rule, four square inches of fastener adhesive area per pound (57.3 square centimeters per kilogram) of static load to be supported is suggested as a starting point for evaluation. More or less area may be needed depending on specific conditions or end use applications. Rounding the corners, slightly recessing the product into the substrate or providing raised edges around the reclosable fastener can reduce the possibility of edge lifting and improve the overall appearance of the fastener on the finished product. Mechanically securing the corners of the fastener with rivets, staples, screws, etc. may also reduce the possibility of edge lifting, but may reduce the closure performance.

The two most common techniques for attaching these 3M™ Hook and Loop™ Fasteners to various surfaces are summarized below.

1) Pressure Sensitive Adhesive attachment: The use of pressure sensitive adhesives eliminates or reduces the need for sewing, solvent activation, dielectric or ultrasonic bonding or bulk adhesive bonding. This can result in simplicity, improved safety and lower installation costs. Pressure sensitive adhesive products can be applied manually or automatically using a variety of equipment choices. Contact your 3M sales representative to discuss automated equipment options.

## Handling/Application Information

### Application Techniques

The following information is intended to assist the designer considering the use of adhesive-coated 3M™ Hook and Loop Fasteners. System product performance depends upon a number of factors, including the fastener (material, adhesive and area), application method, surface characteristics (material, texture and cleanliness), environmental conditions (moisture, ultraviolet and temperature exposure) plus the time it is expected to support a given load. Because many of these factors are uniquely within the user's knowledge and control, it is required that the user evaluate 3M products to determine whether they are fit for a particular purpose and suitable for the user's substrates, method of application and desired end use.

## Handling/Application Information (continued)

### Directions for Use

To obtain an optimum bond to any surface, both the fasteners and the target surfaces should have equilibrated for a minimum of 1 hour at temperatures between 68°F (20°C) to 100°F (38°C) before application. The liner protecting the adhesive is removed and preferably without touching the adhesive, the fastener is applied to the substrate. Exposure of the adhesive to ambient conditions without the protective liner, before applying to the surface, should be minimized as initial adhesive tack may decrease. Flexible materials should be lying on a hard flat surface so as to permit uniform adhesive contact with the surface. Use of a rubber hand roller, press platen or similar device is recommended to ensure full adhesive contact or wet-out with the substrate surface. Approximately 4.5 pounds of force per square inch, (310 grams per square centimeter) is recommended to increase adhesive contact, improving bond strength. For all adhesive applications, it is important to ensure that the edges are rolled down to reduce the chance of edge lifting.

### Surface Preparation

Highly textured surfaces may reduce the ultimate adhesion levels and care should be given to minimize the surface texture or roughness. Adhesive backed 3M™ Hook and Loop Fasteners should be applied to surfaces that are clean, dry and free of oil, grease, dust, mold release agents or surface contaminants that could reduce the adhesion. It is recommended to remove any surface contaminants that may reduce adhesion by using a method suited for the type and quantity of surface contaminants present.

Note: It is important for the customer to follow all manufacturer's precautions and directions for use as well as any specific government regulations or customer and supplier requirements for the method(s) used to remove any contamination on the surface of the Substrate or preparing the surface for attaching the fastener(s). In exceptional cases, especially when removing silicone mold release agents or on rough, porous surfaces, it may be necessary to lightly abrade the surface, use an adhesion promoter, or surface sealer to optimize the adhesive bond to the substrate. The selection of abrasion, priming or sealing methods will depend upon the substrates and the environmental conditions the product will be exposed to during use.

### Storage and Shelf Life

Store in original packaging between 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity.

### Family Group

	TB3000	TB3401 / TB3402	TB3506 / TB3507	TB3526N / TB3527N	TB3530 / TB3531	TB3571 / TB3572
Thickness (mm) Test Condition: Engaged	1.3	3.2	0.81	3.6	3.6	3.6
Thickness (mm) Test Condition: Unmated	0.66	2	TB3506: 0.59 mm, TB3507: 0.30	TB3526N: 2.4 mm, TB3527N: 3.2	TB3530: 2.4 mm, TB3531: 3.2	TB3571: 2.4 mm, TB3572: 3.2
Material	Hook - Polypropylene	Loop - Woven Nylon	Hook - Polypropylene	Hook - Woven Nylon	Hook - Woven Nylon	Hook - Woven Nylon
Backing	No Adhesive, Back to Back Hook and Loop	No Adhesive, Sew on	General Purpose Acrylic	High Performance Rubber PSA	General Purpose Rubber PSA	High Performance Acrylic PSA
Liner			83 lb Brown Polykraft with green 3M	Polyethylene with red "3M"	Polypropylene	Polyolefin with embossed 3M logo
Liner Thickness (mm)				0.08	0.08	0.1
Liner Color				White	White	Clear

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## References

1. 3m.com Product Page  
Url: [https://www.3m.com/3M/en\\_US/company-us/all-3m-products/~ /3M-Hook-Loop-Fastener-TB3526N-TB3527N?N=5002385+3293241454&rt=rud](https://www.3m.com/3M/en_US/company-us/all-3m-products/~ /3M-Hook-Loop-Fastener-TB3526N-TB3527N?N=5002385+3293241454&rt=rud)
2. Safety Data Sheet  
Url: [https://www.3m.com/3M/en\\_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en\\_US&co=ptn&q=TB3526N / TB3527N](https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=TB3526N / TB3527N)

## ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001: 2000 and ISO/TS 16949:2002 standards.

## Recognition/Certification

MSDS: 3M has not prepared a MSDS for this product which is not subject 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, the product should not present a health or 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 or safety hazards. TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements.

## Technical Information

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## Product Use

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