



Technical Data Sheet

3M™ Loop Fastener SJ3401

Product Description

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

Product Features

The woven nylon hook has flexible, self-supporting inverted j-hooks protruding up from the backing with approximately 300 hooks per square inch (46 hooks/square cm). The woven nylon loop has thousands of soft, pliable napped loops protruding above the backing, providing for thousands of openings and closings (cycles). Both the hook and loop are preshrunk to insure maximum dimensional stability and flatness. Standard colors available are black, white and beige, with several custom colors available with extended delivery times and additional costs.

SJ3401 is plain backed loop for applications not requiring an adhesive. Most commonly sewn. Very durable.

Commonly paired with 3M™ Hook Fastener SJ3402, this loop fastener can also engage with other 3M™ Hook Fasteners.


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

Property	Values	Additional Information
Material	Loop- Woven Nylon	
Backing	No Adhesive Sew on	
Adhesive Type	None	
Liner	None	
Color	Black, White	
Thickness	2 mm	View
Notes: Thickness depends upon the amount of compression load on the pieces.		
Thickness	80 mil	View

Notes: Thickness depends upon the amount of compression load on the pieces.

Engaged Thickness (mil)	120 mil	View 
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Notes: Thickness depends upon the amount of compression load on the pieces.

Engaged Thickness (mm)	3.1 mm	View 
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Notes: Thickness depends upon the amount of compression load on the pieces.

Weight	0.04 g/cm ²	
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Weight	0.009 oz/in ²	
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Typical Performance Characteristics

Property	Values	Additional Information
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Long Term Temperature Resistance	93 °C	
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Long Term Temperature Resistance	200 °F	
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Dynamic Tensile	7.6 N/cm ²	View 
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Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute

Dynamic Tensile	11 lb/in ²	View 
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Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute

Overlap Shear Strength	15.2 N/cm ²	View 
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Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute

Overlap Shear Strength	22 lb/in ²	View 
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Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute

Cleavage Strength	13.1 g/cm width	View 
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Substrate: Nylon Hook to Nylon Loop

Cleavage Strength

7.5 lb/in width

View 

Substrate: Nylon Hook to Nylon Loop

T-Peel Adhesion

3.5 g/cm width

View 

Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute. The “T” peel test only measures the closure performance per ASTM D5170 and was not adhered to aluminum panels.

T-Peel Adhesion

2 lb/in width

View 

Substrate: Nylon Hook to Nylon Loop

Notes: Run at 12 inches per minute. The “T” peel test only measures the closure performance per ASTM D5170 and was not adhered to aluminum panels.

90° Peel Adhesion

3.9 g/cm width

View 

Substrate: Nylon Hook to Nylon Loop

Notes: 12 in/min (300 mm/min). The 90° peel has one of the mated fasteners attached to a non-anodized aluminum panel, while the other mated fastener is not attached to an adherend and is disengaged at 90° angle during the peel.

90° Peel Adhesion

2.2 lb/in width

View 

Substrate: Nylon Hook to Nylon Loop

Notes: 12 in/min (300 mm/min). The 90° peel has one of the mated fasteners attached to a non-anodized aluminum panel, while the other mated fastener is not attached to an adherend and is disengaged at 90° angle during the peel.

Cycle Life

5000

View 

Substrate: Nylon Hook to Nylon Loop

Notes: Number of closures before losing 50% of original peel strength

Product Performance

View 

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

Storage and Shelf Life

Shelf Life when stored in original packaging at 72°F (22°C) and 50% RH is 24 months from date of manufacture.

Bottom Matter

3M
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Handling/Application Information

Directions for Use

Attachment Techniques

The following information is intended to assist the designer considering the use of 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) and 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 are suitable for the user's substrates, method of application and desired end use.

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.

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.

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 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. Isopropyl alcohol is a good general use solvent for cleaning contaminants from surfaces for example.

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.

Attachment Procedure: To obtain optimum bond to any surface, both the fasteners and the target surfaces should have equilibrated for a minimum of one 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.

Plain backed

The plain backed 3M hook and loop fasteners are most commonly sewn into their applications. Liquid or hot melt adhesives and staples are other forms of attachment that can be utilized.

Sewing: Although the selvedge edge was initially developed for stitching on, customers often find that they get better anchorage when stitching through the 3M hook and loop portions of the fastener – this may be application dependent. The type of thread and stitch type is also best determined based on individual application, however, the fastener should be stitched on all edges for the best seam strength. Typically, special machine adjustments

are not necessary when using our 3M hook and loop fasteners

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40068841/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=SJ3401

Family Group

Link Tags:

- [• SJ3401](#)
- [• SJ3402](#)
- [• SJ3522](#)
- [• SJ3523](#)
- [• SJ3526N](#)
- [• SJ3527N](#)
- [• SJ3530](#)
- [• SJ3531](#)
- [• SJ3571](#)
- [• SJ3572](#)
- [• SJ3532N](#)
- [• SJ3533N](#)

Products	Material	Backing	Adhesive Type	Liner	Liner Thickness	Color	Liner Color	Thickness	Long Term Temperature Resistance
SJ3531	Loop- Woven Nylon	General Purpose rubber based PSA	Rubber	Polypropylene	0.08 mm	Black, White	White	3.2 mm	90 °F
SJ3401	Loop- Woven Nylon	No Adhesive Sew on	None	None	N/A	Black, White	N/A	2 mm	200 °F
SJ3402	Hook- Woven Nylon	No Adhesive Sew on	None	None	N/A	Black, White	N/A	2 mm	200 °F
SJ3532N	Hook- Woven Nylon	Rubber based PSA	Rubber	White Polypropylene	0.08 mm	Black, White	N/A	2.03 mm	100 °F
SJ3571	Loop- Woven Nylon	High Performance Acrylic PSA	Acrylic	Polyolefin with embossed 3M logo	0.1 mm	Black, White	Clear	3.2 mm	200 °F
SJ3526N	Hook- Woven Nylon	High Performance rubber based PSA	Rubber	Polyethylene with red printing	0.08 mm	Black, White	White	2.4 mm	120 °F
SJ3572	Hook- Woven Nylon	High Performance Acrylic PSA	Acrylic	Polyolefin with embossed 3M logo	0.1 mm	Black, White	Clear	2.4 mm	200 °F
SJ3522	Hook- Woven Nylon	Plasticizer resistant acrylic PSA	Acrylic	Non printed polyolefin film	0.089 mm	Black	Clear	2.4 mm	158 °F
SJ3530	Hook- Woven Nylon	General Purpose rubber based PSA	Rubber	Polypropylene	0.08 mm	Black, White	White	2.4 mm	90 °F
SJ3533N	Loop- Woven Nylon	Rubber based PSA	Rubber	White Polypropylene	0.08 mm	Black, White	N/A	3.05 mm	100 °F

SJ3523	Loop- Woven Nylon	Plasticizer resistant acrylic PSA	Acrylic	Non printed polyolefin film	0.089 mm	Black	Clear	3.2 mm	158 °F
SJ3527N	Loop- Woven Nylon	High Performance rubber based PSA	Rubber	Polyethylene with red printing	0.08 mm	Black, White	White	2.3 mm	120 °F

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.

Information

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