



Technical Data Sheet

3M™ Flame Resistant Loop Fastener SJ3418FR

Product Description

3M™ Reclosable Fasteners offer advanced closure alternatives to zippers, screws, snaps, hooks, bolts and more. They offer greater design flexibility, faster product assembly, smoother and cleaner exterior surfaces and improved product performance in many applications. The hook and loop fasteners consist of two strips of nylon fabric which engage to form a quick fastening attachment.

Product Features

- Commonly paired with 3M™ Flame Resistant Hook Fastener SJ3419FR, this loop fastener can also engage with other 3M™ Hook Fasteners.
- Flame resistant; meets FAR.25.853 Para.(a)(1)(ii) 12 second burn
- Available in black, white, beige (Other colors are available as special orders. 3M recommends the user to evaluate the products to see if it meets their color requirements. See your 3M authorized distributor or 3M representative for color selection guide and minimum requirement.)
- The woven loop is covered with thousands of soft, pliable napped loops, providing for thousands of openings and closings (cycles). The loop is preshrunk to insure maximum dimensional stability and flatness.


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	Nylon 6,6	
Backing	Nylon 6,6	
Adhesive Type	None	
Liner	none	
Color	Black, White	
Thickness	2.2 mm	View
Notes: Thickness depends upon the amount of compression load on the pieces.		
Thickness	87 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.

Thickness Tolerance	± 15 %	
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Selvedge Edge	2.4 ± 0.8 mm	
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Selvedge Edge	3/32 ± 1/32 in	
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Weight	0.04 g/cm ²	
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Weight	0.009 oz/in ²	
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Typical Performance Characteristics


Additional Test notes

Engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.

Property	Values	Additional Information
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Static Tensile	10000 min	View 
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Notes: All combinations hold minimum 1000 grams/in² for indicated time and temperature

Static Tensile	180 min	View 
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Notes: All combinations hold minimum 1000 grams/in² for indicated time and temperature


Long Term Temperature Resistance	93 °C	
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Long Term Temperature Resistance	200 °F	
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Static Shear	10000 min	View 
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Substrate: Rigid to Rigid


Notes: Holds 2,2lbs./in2 (1000 grams) for indicated Time and Temperature


Static Shear	120 min	View 
Substrate: Rigid to Rigid		
Notes: Holds 2,2lbs./in2 (1000 grams) for indicated Time and Temperature		


Flammability Test	Unless stated differently, typical system performance characteristics were measured under controlled laboratory conditions of 72°F (22°C) and 50% Relative Humidity to obtain maximum reliability. The user should evaluate products in the actual application to ensure suitable performance for the intended use.	
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Dynamic Tensile (Engage)	< 0.69 N/cm ²	View 
Substrate: Rigid to Rigid		
Notes: Engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		


Dynamic Tensile (Engage)	< 1.0 lb/in ²	View 
Substrate: Rigid to Rigid		
Notes: Engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		

Dynamic Tensile (Disengage)	8.07 N/cm ²	View 
Substrate: Rigid to Rigid		
Notes: Engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		

Dynamic Tensile (Disengage)	11.7 lb/in ²	View 
Substrate: Rigid to Rigid		
Notes: Engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		

Overlap Shear Strength	16.2 N/cm ²	View 
Substrate: Rigid to Rigid		
Notes: 1" x 1" overlap; engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		

Overlap Shear Strength	23.4 lb/in ²	View 
Substrate: Rigid to Rigid		
Notes: 1" x 1" overlap; engaged with firm pressure and disengaged, peeled or cleaved at the rate of 12 inches (305 mm) per minute.		

Cleavage Strength	950 g/cm width	View 
Substrate: Rigid to Rigid		
Notes: System performance tests are determined by measuring the performance of the entire mated reclosable fastener system consisting of two non-anodized aluminum plates joined together with the indicated fasteners.		

Cleavage Strength

5.3 lb/in width

View 

Substrate: Rigid to Rigid

Notes: System performance tests are determined by measuring the performance of the entire mated reclosable fastener system consisting of two non-anodized aluminum plates joined together with the indicated fasteners.

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

Storage and Shelf Life

Shelf life is 24 months from date of manufacture when stored in original packaging between 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity.

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer’s automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M’s Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer’s use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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Handling/Application Information

Application Examples

3M™ Flame Resistant Hook and Loop Fasteners SJ3419FR and SJ3418FR can provide a strong fastening system with flame resistance for materials which can be sewn, stapled or adhered using hot melt or liquid adhesives. Because product performance will depend on that the user evaluate the 3M product to determine whether it is fit for a particular material purpose and suitable for the user’s method of application.

Directions for Use

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 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 hook and loop fasteners.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40068846/

Family Group

Link Tags:

- SJ3418FR

Products	Material	Backing	Adhesive Type	Liner	Color	Thickness	Long Term Temperature Resistance
SJ3418FR	Nylon 6,6	Nylon 6,6	None	none	Black, White	2.2 mm	200 °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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