

Technical Data Sheet

3M™ Dual Lock™ Low Profile Reclosable Fastener SJ4570

Product Description

3M™ Dual Lock™ Reclosable Fasteners are positive locking, hidden fasteners designed for use in a variety of attachment solutions. They consist of continuous strips of polyolefin stems with a mushroom shaped top protruding up from the backing. When snapped together the mushroom shaped caps interlock producing a strong reliable Fastener.

3M™ Dual Lock™ Reclosable Fastener SJ4570 Low Profile is designed for indoor use and low to medium temperature performance. This product offers temperature resistance up to 158°F and can be used with metals such as aluminum and stainless steel; as well as glass, many plastics (polypropylene, polyethylene, polycarbonate, ABS) powder coated paints and medium to low surface energy materials.

The Dual Lock Low Profile has one stem density of approximately 705 stems per square inch and they interlock to themselves. The low profile products are not intended to mate to the standard size Dual Lock.

There are a variety of pressure sensitive adhesives available with Dual Lock to cover most application needs. The pressure sensitive adhesive makes the Dual Lock easy to use, simply remove the liner, place the Dual Lock and apply firm consistent pressure to assure good contact with the substrate you are adhering. We also offer non-adhesive backed Dual Lock for applications where the PSA does not meet your needs.

Product Features

- Clear, low profile, polyolefin fastener is half the thickness of standard 3M™ Dual Lock™ Reclosable Fasteners and is self-mating
- Interlocking mushroom-shaped heads provide strong, reliable and durable fastening that can be opened and closed multiple times
- Low surface energy acrylic adhesive bonds well to a variety of substrates including metals, powder-coated paints and a broad range of plastics
- Strong fastener secures with an audible snap, verifying closure
- An alternative to screws and bolts, this hidden fastener provides a snug fit and smooth aesthetic appearance
- Features good temperature resistance of 158°F (70°C)
- Best suited for indoor use

General Information

This product is half the thickness of standard 3M™ Dual Lock™ Reclosable Fasteners, providing a low profile attachment. An alternative to screws and bolts, this hidden fastener provides a snug fit and smooth aesthetic appearance.

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	Polypropylene	
Adhesive Type	300 LSE (Acrylic)	
Color	Clear	

Color	Clear	View 
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Test Name: Cured

Backing Color	Clear	
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Liner	86# Polycoated Kraft	
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Liner Thickness	0.17 mm	
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Thickness	1.63 mm	View 
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Test Condition: Unmated

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


Thickness	64.5 mil	View 
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Test Condition: Unmated

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

Engaged Thickness (mil)	98 mil	View 
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Notes: Thickness depends upon the amount of compression load on the pieces.

Engaged Thickness (mm)	2.489 mm	View 
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Notes: Thickness depends upon the amount of compression load on the pieces.

Liner Thickness	6.5 mil	
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Weight	0.044 g/cm ²	
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Weight	0.012 oz/in ²	
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Typical Performance Characteristics

Property	Values	Additional Information
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90° Peel Adhesion	2.9 N/cm	View 
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Substrate: Low Profile to Low Profile
Backing: Flexible from Rigid

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion	1.7 lb/in width	View 
Substrate: Low Profile to Low Profile Backing: Flexible from Rigid		
Notes: 12 in/min (300 mm/min)		
Long Term Temp C	70 °C	View 
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance	-29 °C	View 
Test Condition: Long Term (day, weeks)		
Long Term Temp F	158 °F	View 
Test Condition: Long Term (day, weeks)		
Minimum Long Term Temperature Resistance	-20 °F	View 
Test Condition: Long Term (day, weeks)		
Dynamic Tensile (Disengage)	27.5 N/cm ²	View 
Substrate: Low Profile to Low Profile		
Dynamic Tensile (Disengage)	40 lb/in ²	View 
Substrate: Low Profile to Low Profile		
Overlap Shear Strength	28.2 N/cm ²	View 
Substrate: Low Profile to Low Profile		
Overlap Shear Strength	41 lb/in ²	View 
Substrate: Low Profile to Low Profile		
Cleavage Strength	7.1 N/cm	View 
Substrate: Low Profile to Low Profile		
Notes: Rigid backed from Rigid backed		
Cleavage Strength	4 lb/in width	View 
Substrate: Low Profile to Low Profile		
Notes: Rigid backed from Rigid backed		
T-Peel Adhesion	0.9 N/cm	View 
Substrate: Low Profile to Low Profile		
Notes: Flexible from Flexible		

T-Peel Adhesion

0.5 lb/in width

View 

Substrate: Low Profile to Low Profile

Notes: Flexible from Flexible

Cycle Life

150

View 

Substrate: Low Profile to Low Profile

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

Design Considerations

- As a general rule, four square inches of fastener area per pound of static tensile or shear 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.
- Whenever possible design one side of the Dual Lock reclosable fasteners to be larger than the mating side. This will allow for variability or mismatch in Dual lock alignment positions, and ensure 100% fastening area contact. Another approach would be to design two rectangular shaped fastener pieces so that they can be engaged in a cross web/perpendicular pattern (crossed).
- Dual Lock disengagement strength/performance is strongest in direct tensile. Peel/cleavage mode is where it is most easily removed.
- Final product performance depends upon a combination of factors: the substrate and its surface characteristics, the fastener selected, the application method and conditions, the time and environmental conditions required for the application. Because these factors are unique to each application, the user must evaluate Dual Lock and do any testing required to determine Dual Lock's suitability for the user's desired end use.

Storage and Shelf Life

To obtain 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.

Bottom Matter

3M
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Trademarks

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References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40068890/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=SJ4570

Family Group

Link Tags:

- [SJ4570](#)
- [SJ4575](#)
- [SJ4580](#)

Products	Material	Color	Liner	Liner Thickness	Thickness	Long Term Temp F	Minimum Long Term Temperature Resistance	Backing	Long Term Temp C	Adhesive Type
SJ4570	Polypropylene	Clear	86# Polycoated Kraft	0.17 mm	1.63 mm	158 °F	N/A	N/A	N/A	N/A
SJ4575	Polypropylene	Clear	86# Polycoated Kraft	N/A	1.63 mm	N/A	-29 °C	N/A	70 °C	300 LSE (Acrylic)
SJ4580	Polypropylene	Clear	Red, non-silicone liner	N/A	1.88 mm	220 °F	N/A	Polypropylene	104 °C	High Temperature Acrylic

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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