

June, 2014

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

3M™ Dual Lock™ Low Profile Reclosable Fastener SJ4570

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	
Adhesive Color	Clear	
Backing Color	Clear	
Material	Polypropylene	
Adhesive	300 LSE (Acrylic)	
Liner	86# Polycoated Kraft	
Liner Thickness	0.17 mm	6.5 mil
Weight	0.044 g/cm ²	0.012 oz/in ²

Thickness		Test Condition
1.63 mm	64.5 mil	Unmated
2.489 mm	98 mil	Engaged

Property: Thickness

Typical Performance Characteristics

Property	Values		Substrate	Notes
Service Temperature Range	29 to 70 °C	-20 to 158 °F		
Dynamic Tensile (Disengage)	27.5 N/cm ²	40 lb/in ²	Low Profile to Low Profile	
Dynamic Shear	28.2 N/cm ²	41 lb/in ²	Low Profile to Low Profile	
Cleavage Strength	7.1 N/cm width	4 lb/in width	Low Profile to Low Profile	Rigid backed from Rigid backed
T-Peel Adhesion	0.9 N/cm width	0.5 lb/in width	Low Profile to Low Profile	Flexible from Flexible
90° Peel Adhesion	2.9 N/cm width	1.7 lb/in width	Low Profile to Low Profile	Flexible from Rigid

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Typical Performance Characteristics (continued)

Property	Values		Substrate	Notes
Cycle Life	150		Low Profile to Low Profile	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.

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Information

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References

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

	SJ4570	SJ4575	SJ4580
Thickness (mm) Test Condition: Unmated	1.63	1.63	
Thickness (mm) Test Condition: Engaged	2.489	2.489	2.997
Material	Polypropylene	Polypropylene	Polypropylene
Adhesive	300 LSE (Acrylic)	300 LSE (Acrylic)	High Temperature Acrylic
Liner	86# Polycoated Kraft	86# Polycoated Kraft	Red, non-silicone liner
Liner Thickness (mm)	0.17	0.17	

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ISO Statement

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



Industrial Adhesives and Tapes Division
3M Center
St. Paul, MN 55144-1000
800-362-3550
www.3M.com

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