English-EU

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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

Attribute Name	Test Condition	Value
Color		Clear
Backing Color		Clear
Adhesive Type		300LSE (Clear Acrylic)
Weight		0.044 g/cm²
Material		Polypropylene
Thickness	Unmated	1.63 mm [1]
Engaged Thickness		2.49 mm [1]
Liner		86# Polycoated Kraft
Liner Thickness		0.17 mm

[1] Thickness depends upon the amount of compression load on the pieces.

Typical Performance Characteristics

Substrate: Low Profile to Low Profile

Attribute Name	Temperature	Backing	Value
90° Peel Adhesion	23 °C	Flexible from Rigid	2.9 N/cm [1]
Overlap Shear Strength			28 N/cm²
T-Peel Adhesion			0.9 N/cm [2]
Dynamic Tensile (Disengage)			28 N/cm²
Cleavage Strength			7.1 N/cm [3]

[1] 304 mm/min (12 in/min)

[2] Flexible from Flexible

[3] Rigid backed from Rigid backed

Attribute Name	Substrate	Value
Long Term Temperature Resistance		70 °C [1]
Minimum Long Term Temperature Resistance		-29 °C [1]
Cycle Life	Low Profile to Low Profile	150 [2]

[1] Long Term (day, weeks)

[2] Number of closures before losing 50% of original peel 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

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For 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.

Information

Precautionary Information: Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information, please contact your local 3M Office. You can click or scan QR code to see contact detail or visit www.3M.com Important Information: All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M’s control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user’s knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user’s method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law. Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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