



Dual Lock™ Low Profile Reclosable Fastener

SJ-4570

Preliminary Product Data Sheet

Updated : May 2000
Supersedes : New

Product Description

3M™ Dual Lock™ Low Profile Reclosable Fasteners can replace conventional fasteners such as, screws, clips, rivets, snaps and bolts in many applications where items need to be accessed or repositioned frequently. Dual Lock low profile reclosable fasteners consist of continuous strips of plastic backing, with tiny plastic mushroom shaped stems protruding up from the backing strip. When two pieces of Dual Lock low profile reclosable fasteners are pressed together, thousands of “mushroom heads” interlock with one another creating an audible snap which announces that the fastener is locked. The Dual Lock low profile reclosable fastener is thinner allowing it to be more flexible than similar reclosable fasteners. In addition, the Dual Lock low profile reclosable fastener offers intermediate strength between regular Dual Lock reclosable fasteners and 3M Scotchmate™ reclosable fasteners, with all of the advantages of a self-mating product.

Product Construction

Material of Construction	Polypropylene
Backing Colour	Clear
Adhesive	Clear Acrylic
Liner	Paper, Diecuttable

Physical Properties Not for specification purposes

Weight	0.31 grams/1” ² (25mm)
Operating Temperature Range	-20°F (29°C) and up to 158°F (70°C)
Engaged Thickness ± 15% (without liner)	0.067 in. 1.7 mm
Plasticiser Resistance	No
Closure Cycle Life	25-100 Cycle Life is the number of cycles (openings and closings) that the fastener is subjected to while maintaining 50% of the original values for tensile, shear or peel.
Shelf Life	12 months from date of manufacture when stored in original package at 72°F (21°C) and 50% relative humidity.

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Performance Characteristics Not for specification purposes Closure Performance	Dynamic Tensile Engagement Strength	25.9	lbs./sq. inch (kN/m ²)
	Dynamic Tensile Disengagement Strength	42.4	lbs./sq. inch (kN/m ²)
	Dynamic Shear (1" x 1" overlap) Strength	45.4	lbs./sq. inch (kN/m ²)

Performance Characteristics Not for specification purposes Adhesive Performance	Dynamic 90° Peel Adhesion	25.9	lbs./inch width (N/100mm)
	Dynamic Tensile Disengagement Strength	42.4	lbs./sq. inch (kN/m ²)
Dual Lock low profile reclosable fastener SJ-4570 was disengaged, peeled or cleaved at the rate of 12 inches (305mm) per minute. Note : In long term static load applications, conditions such as temperature variation, jarring, vibration etc. can affect long term performance. The user should design the amount of fastening area based on the specific conditions in the application. Four square inches of fastening area per pound of static load is suggested as a starting point for such evaluations.			

Application Techniques

Surfaces must be smooth, thoroughly cleaned and free of oil and surface contamination and dry. In some exceptional cases (contamination by mould release, rough or porous surfaces etc.) it may be necessary to sand or lightly abrade the surface. It is recommended that the substrate be cleaned with a solvent such as isopropanol/water solution (50/50) and allowed to dry before application of fastener.

Note : When using solvents, be sure to follow the manufacturer's precautions and directions for use when handling such materials.

Apply when fastener and surface temperatures are above 68°F (20°C). Remove protective liner (avoid contamination of adhesive) and apply with uniform, firm pressure for intimate surface contact to the substrate. Allow 72 hours dwell for maximum bond strength prior to testing or stressing the adhesive bond. Improved resistance to edge peel can be provided by recessing the Dual Lock low profile reclosable fastener or by rounding the corners.

General Information

PRESSURE SENSITIVE ADHESIVE ATTACHMENT :

The adhesive system on SJ-4570 provides reliable bonding to a wide variety of materials including but not limited to those listed below :

Bare Metals	Many Plastics :	ABS
Painted Metals		Acrylic
Glass		Polycarbonate
Fibreglass		Polystyrene
Sealed Wood		Rigid Vinyl
Structural Composites		Powder Coated Paints

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Application Ideas

Backed with 300 LSE Laminating Adhesive technology, Dual Lock low profile reclosable fasteners are designed for joining together dissimilar materials such as powder-coated paint and hard-to-bond to surfaces as well as acrylic, wood, glass, metal, polypropylene, foam and fibreglass. Used in Point of Purchase and Trade Show Exhibition, marine, electronic and automotive markets, Dual Lock low profile reclosable fasteners attach ceiling tiles, carpet, headliners, seat cushions, covers, trade show designs, access panels, wall panels and small electronic devices.

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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.



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