



Dual Lock™ Reclosable Fasteners

SJ3442 (Type 170)

SJ3440 (Type 250) SJ3460 Clear

SJ3441 (Type 400) SJ3461 Clear

Technical Data

September 2017

Product Description

3M™ Dual Lock™ Reclosable Fasteners consist of a continuous polyolefin film backing with mushroom shaped stems protruding up from the backing. When pressed together these mushroom shaped stems interlock to provide you with a strong reliable attachment. There are three different stem densities (170, 250 and 400) offered with these fasteners, referring to the approximate number of stems per square inch.

These 3M™ Dual Lock™ Reclosable Fasteners SJ3440, SJ3441, SJ3442, SJ3460 and SJ3461 have no adhesive backing and are used in specialty applications where unique attachment methods are necessary. 3M™ Dual Lock™ Reclosable Fasteners were developed and work best when held rigid and flat therefore all data provided in this document is typical data for when the product is securely anchored, held rigid and lays flat. The strength will vary depending on the applications and how well the fastener is attached. It is up to the end user to determine if this product meets the application needs.

These 3M™ Dual Lock™ Reclosable Fasteners can be mated in the following combinations of increasing closure strength: type 170 to type 250; type 170 to type 400 and type 250 to type 250 are about the same strength; and type 250 to type 400. For high tensile and shear strength applications, the 3M™ Dual Lock™ Reclosable Fasteners can combine with 3M™ Loop Fastener to form a limited use closure (about 25).

Product Construction

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Product Number	(Black)	SJ3442	SJ3440	SJ3441
	(Clear)		SJ3460	SJ3461
Type: Approx. Stems/In2 (Stems/cm2)		170 (26)	250 (39)	400 (62)
Material of Construction: polyolefin blend				
Thickness ± 10%				
	Unmated:	0.101 inch (2.57 mm)		
	Engaged:	0.152 inch (3.86 mm)		

Closure Cycle Life: 1,000
Number of opening and closings before losing 50% of original tensile strength

SHELF LIFE 24 months from mfg. date when stored at 72F with 50%RH

3M™ Dual Lock™ Reclosable Fasteners

System Performance

Note: The following technical information and data is intended as a guideline to assist customers in selecting 3M™ Dual Lock™ Reclosable Fasteners for further evaluation. This technical information is not product release specifications or standards.

All of these tests were performed on 3M™ Dual Lock™ Reclosable Fasteners which was well anchored, held rigid and laid flat. Flexible applications can expect different results.

Dual Lock™ Combination	Type 170/250	Type 170/400	Type 250/250	Type 250/400
Initial Tensile (Rigid to Rigid Substrates) pounds/sq inch (Newtons/cm ²) @ 72°F (22°C)/50% RH				
Dynamic Tensile				
Engagement Force:	13 (9)	21(14.5)	22 (15)	31 (22)
Disengagement Force:	27 (19)	43(30)	43 (30)	60 (42)
Static Tensile				
Holding Power	Holds minimum 1000 grams/in ² for indicated time and temperature			
72°F	10,000 minutes for all combinations			
100°F/100% RH	10,000 minutes for all combinations			
220°F	10,000 minutes for all combinations			
Initial Shear (Rigid to Rigid Substrates) pounds/sq inch (Newtons/cm ²)				
Dynamic Shear (1" x 1" overlap)	14	21	22	59
Static Shear				
Holding Power	Holds minimum 750 grams/in ² for indicated time and temperature			
72°F	10,000 minutes for all combinations			
100°F/100% RH	10,000 minutes for all combinations			
220°F	10,000 minutes for all combinations			
Peel and Cleavage pounds/inch width				
Cleavage Strength (Rigid to Rigid), 2.25" long	12	24	24	35

Note: Unless stated differently, the typical system performance and product properties were obtained using specific test methods under controlled laboratory conditions of 72°F ± 5°F and 50% ± 10% relative humidity. The user is responsible for evaluating 3M™Dual Lock™ Reclosable Fasteners under expected use conditions to ensure suitable performance for the intended application.

Design

Considerations

The following information is intended to assist the designer considering the use of 3M™ Dual Lock™ Reclosable Fasteners. Product performance depends upon a number of factors, including the 3M™ Dual Lock™ Reclosable Fastener selected, the manner in which reclosable fastener is attached, and the time and environment in which it is expected to perform.

Because many of these factors are uniquely within the user's knowledge and control, it is required that the user evaluate 3M products to determine whether it is fit for a particular purpose and suitable for the users substrates, method of application and desired end use.

It is suggested that 4 square inches of 3M™ Dual Lock™ Reclosable Fasteners per 1 pound of static load be used as a starting point when determining how much 3M™ Dual Lock™ Reclosable Fasteners to use on any particular application. The amounts may be adjusted up or down depending on the needs of the specific applications.

3M™ Dual Lock™ Reclosable Fasteners

Resistance

To Chemicals: The polyolefin backing stems and mushroom top should resist attack by most common solvents and alkaline solutions.

To Environmental Exposure: Temperatures between -20°F (-29°C) and 220°F (104°C) should have minimal effect on closure strength. To maintain performance when exposed for extended periods to sunlight or ultraviolet radiation these products should be placed between two opaque or UV resistant surfaces. Specific testing under the expected environmental conditions is recommended.

To Water or Humidity: Closure strength should not be affected by prolonged exposure to water or humidity.

Storage

Store under normal conditions of 72°F (22°C) and 50% R.H.

Shelf Life

To obtain best performance, use this product within 24 months from date of manufacture.

Technical Information

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Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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ISO 9001

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