

VELCRO® Brand

ALFA-LOK™ Fastener with **AFTC SilverTape®** 6411 Low Surface Energy


NEW




Features

- Free positionable, re-closable fastening system
- High Performance double sided acrylic foam tape
- Suitable for high, medium and low surface energy materials such as glass, metals, plastics, ceramics and (powder) coatings

Compatibility Surfaces

SUBSTRATES	VELCRO® Brand ALFA-LOK™ Fastener
GLASS	+
ALUMINUM (ADONIZED, RAW)	+
STEEL (STAINLESS, GALVANIZED)	+
PLYWOOD/MDF	+
FORMICA (POLISHING SIDE)	+
CARDBOARD	+
PAINTED WALLBOARD	+
CONCRETE	+
STONE	+
ABS	+
POLYESTER	+
VINYL	+
POLYACRYLIC/PMMA	+
POLYCARBONATE	+
POLYETHYLENE	+
POLYPROPYLENE	+
FABRICS	+

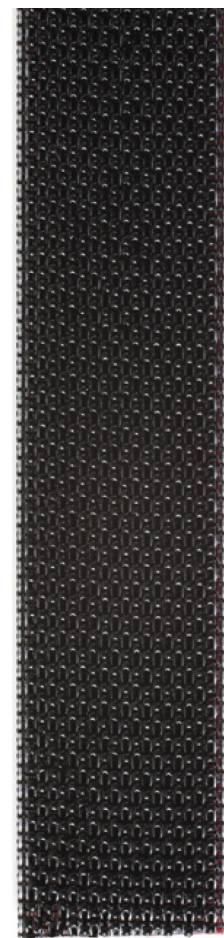
Performance Specifications

Testing	Minimum Value
BASE MATERIAL	Modified Solvent based Acrylic Polymer
ADHESIVE COLOUR	Black
 °C TEMPERATURE RANGE OF USE	Long Term: From -40 °C to +90 °C Short Term: 120 °C
 PEEL 180° ADHESION (FINAT-FTM 01) (AVERAGE)	12 N/cm * 15 N/cm * - (after 24 h)
SOFTENING POINT	90 °C
 STATIC SHEAR (ASTM 3654)**	1,000 gr. at 22 °C 500 gr. at 66 & 93 °C 250 gr. at 121 °C
TACK	Medium/Low
APPLICATION METHOD	Pressure
APPLICATION	High, medium and low surface energy

* Average according typical values.

The specifications are as a reference and are pending to confirm.

** Weight that ½ square inch will hold 10,000 minutes (7 days).






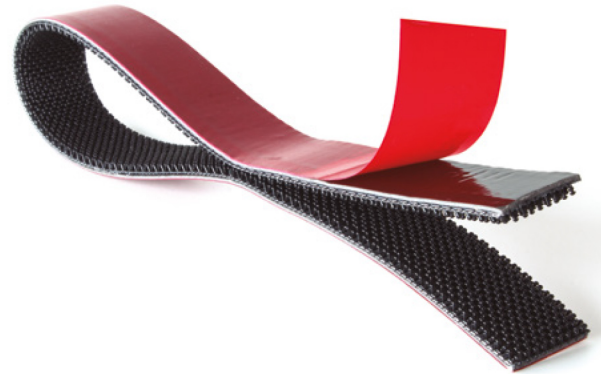
VELCRO® Brand

ALFA-LOK™ Fastener Closure Characteristics



SELF-ENGAGING MUSHROOM

CHARACTERISTICS	VELCRO® Brand ALFA-LOK™ Tape
DENSITY	48 heads/cm ²
CONSTRUCTION	Woven quadrilobal mushroom tape
BASE MATERIAL	Base: Polyester
	Mushrooms: Polypropylene
FASTENER	Self-engaging
CYCLE LIFE	-
 PEEL STRENGTH (AVERAGE)	2 N/cm
 SHEAR STRENGTH (AVERAGE)	50 N/cm ²
 TENSILE DISENGAGEMENT (AVERAGE)	40 N/cm ²
STANDARD COLOURS	Black
STANDARD WIDTHS	25mm
STANDARD PUT-UPS	25m rolls with flanges
	Cut pieces (customized)



PRODUCT DESCRIPTION



AFTC SilverTape® 6411 - This product is a double sided acrylic based adhesive tape, which is especially designed for a wide variety of materials with low surface energy. The tape is capable of absorbing the differing thermal expansions of different materials. This modified multipurpose adhesive tape is suitable for (powder) coatings, coated glass, ceramics and several plastics with low energy surfaces (LSE- Silicones, Teflon, Polypropylene, Polyethylene) and has been specifically developed for applications where the use of a primer or adhesion promoter is not preferred. AFTC SilverTape® 6411 has an excellent initial tack and adhesion during the application of powder coated surfaces, plastics, coated glass and other low surface energy surfaces. Other features include good plasticizer resistance and very good adaptability.

COUNTRY OF ORIGIN

South Korea

PRODUCT CONSTRUCTION

Adhesive	AFTC SilverTape® 6411
Material Composition	Acrylic Adhesive
Color	Black
Thickness	Avg. = 1.1 mm *
Weight	Avg. = 660 gr/m ² *

PERFORMANCE CHARACTERISTICS



Adhesive	AFTC SilverTape® 6411
Peel 90° Adhesion (FINAT-FTM 02)	Avg. = 17 N/cm ² - (after 20 min) Avg. = 21 N/cm ² - (after 24 h)
Peel 180° Adhesion (FINAT-FTM 01)	Avg. = 12 N/cm ² - (after 20 min) Avg. = 15 N/cm ² - (after 24 h)
Dynamic Shear (FINAT-FTM 18)	Avg. = 44 N/12.7 mm*
Static Shear (ASTM 3654)**	1,000 gr at 22°C / 500 gr at 66 & 93°C / 250 gr at 121°C
Temperature Range of use	Long Term: From -40°C to + 90°C Short Term: 120°C

*Average according typical values. The specifications are as a reference and are pending to confirm.

**Weight that ½ square inch will hold 10,000 minutes (7 days)

PRODUCT COMBINATIONS

AFTC SilverTape® 6411 is combined with VELCRO® Brand ALFA-LOK™ fastener. Other kind of combinations are under development.

ADDITIONAL PERFORMANCE CHARACTERISTICS



Outdoor Use

AFTC SilverTape® 6411 has very good resistance to UV light, weathering, aging, and yellowing (UV influence), resulting in excellent long term stability. Suitable for outdoor use.



Solvent Resistance

Excellent resistance to chemicals and solvents. The product should be tested in use for a specific application and has not been tested for resistance to transportation fluids such as gasoline, motor oils, and transmission fluids.



Flammability Resistance

AFTC SilverTape® 6411 is not fire retardant adhesive and should not be used where flammability resistance is a concern.



Water/Humidity resistance

Adhesive has a good resistance to humidity. The product should be tested in use for a specific application and has not been test for complete immersion in water.



Sterilization

This product has not been tested for autoclaving, gas, or steam sterilization.



Washing and Dry Cleaning

Washing and Dry Cleaning doesn't apply to the adhesive.



Biocompatibility

AFTC SilverTape® 6411 has not been tested for biocompatibility.



Static Discharge

AFTC SilverTape® 6411 has not been tested for static discharge after opening and closing the fastener. If static discharge is a concern it should be tested for in the end use application.



Sewing Resistance

Sewing Resistance doesn't apply to de adhesive.

APPLICATION GUIDELINES

Every good bond starts with proper surface preparation. This preparation consists of several steps, such as cleaning, abrading, applying pressure, the use of a primer and the right working environment. It is important to ensure your work area to be clean and free from dust and contaminants.

A minimum temperature of 15 °Celsius is required.



Cleaning - To clean your light and medium contaminated substrates, isopropanol/alcohol solution (IPA) is acceptable. When cleaning your substrate, a tear free, light coloured paper towel is required. Wipe the substrate in one direction using the one cloth method (one cloth with cleaner) or a two cloth method (one cloth with cleaner and one dry cloth to follow) is acceptable if you are short on time. Repeat these steps until your cloth is clean and free of any contaminants. For heavily contaminated

substrates, use a cleaning agent such as MEK, Heptane or Acetone. These cleaning agents may leave a residue, which would have to be removed using the IPA solution.

Abrasion - When bonding to raw aluminium, abrading of the surface is a must. The oils used in the waltzing of the aluminium are pressed into the pores of the material. To remove these oils, that will influence the bond, we recommend using the abrasive pads assuring the proper level of abrasion without damaging your substrates. Besides raw aluminium, abrading is a method utilized to help improve your bond. After the abrasion process is completed, remove any residue using an IPA solution following the methods mentioned above.

Primer - The use of a primer is recommended when bonding to some low surface energy substrates. Examples include, different types of polymers, powder coated metals, or porous materials such as wood, cork, stone or concrete. Primers are also used to help speed up your production process. The AFTC SilverTape[®] 6411 line can take up to 72 hours to reach its end-strength. The use of a primer ensures the end-strength will be achieved within 20 minutes. Determining which one of these primers is suitable for your application ultimately depends on the substrates and environmental influences.



Pressure

AFTC SilverTape[®] 6411 is a pressure sensitive adhesives. Therefore, a minimum amount of pressure is required on the bond line to ensure the maximum adhesion to your substrates. This pressure should be applied in a rolling fashion. A hand roller or mechanical pressure are the preferred methods. The pressure on the bond line must be a minimum of at least 10N/cm².



Storage & Shelf Life

Please make sure that the tape is stored in its original packaging, in a dry place and at a preferable temperature between 4 °C and 38 °Celsius. When the tape is stored under the proper conditions, the tape has a shelf life of 18 months.

CERTIFICATIONS

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REGULATORY REQUIREMENTS⁽³⁾

AFTC SilverTape[®] 6411 meets the requirements of following documents:

- Regulation (EC) No 1907/2006 REACH

⁽³⁾ List of most important Regulatory Requirements. Ask for specific Regulatory Requirements per product.

PRODUCT USE

The information, statements, and comments contained within this document are based on our experience and testing and are believed to be accurate. However, because there are many factors involved in specific applications that can impact end use and performance, product users should always test the product for its ability to meet the requirements of their specific use and method of application.

LIMITED WARRANTY

Velcro Europe, S.A. warrant that each product will substantially comply with its written specifications at the time of shipment. ALL OTHER WARRANTIES, EXPRESS OR