

VELCRO® Brand  
**Loop 010 FR**

Technical Data Sheet  
November 2023

**PRODUCT DESCRIPTION**



The **VELCRO® Brand Loop 010 FR** is a strong and durable textile loop that has a flame-retardant treatment, making it suitable for fire resistance industrial applications. It is a woven medium profile polyamide loop tape, that can be opened thousands of times without losing its strength when paired with the **VELCRO® Brand Hook 058 FR**.

The **VELCRO® Brand Loop 010 FR** is designed for a wide range of flame-retardant applications in various demanding industries such as medical, transportation, military, packaging, footwear & apparel and many others.






Available in multiple colours, widths, converted items and compatible with many application methods such as sewing, welding and **VELCRO® Brand** adhesives.

**PRODUCT CONSTRUCTION**

Fastening system	VELCRO® Brand Loop 010 FR
Construction	Woven fabric
Composition	Polyamide, synthetic coating
Thickness	2.10 - 2.60 mm
Weight	300 g/m <sup>2</sup> ± 10 %
Widths available + Variations <sup>1</sup>	16, 20, 25, 30, 38 ± 1mm 50 ± 1.5mm 100, 107, 150, 160 ± 2mm
Colour available	Check <b>VELCRO® Brand</b> colour chart

<sup>1</sup> Other widths capabilities upon request

**PERFORMANCE CHARACTERISTICS<sup>2</sup>**

Fastening system	VELCRO® Brand Loop 010 FR
 <b>Peel</b> EN-12242	Minimum: 1.3 N/cm Average: 2.0 N/cm Tested with <b>VELCRO® Brand Hook 058 FR</b>
 <b>Shear</b> EN-13780	Minimum: 7.3 N/cm <sup>2</sup> Average: 10.3 N/cm <sup>2</sup> Tested with <b>VELCRO® Brand Hook 058 FR</b>
 <b>Tension</b> NF-G91-103	Minimum: 2.5 N/cm <sup>2</sup> Average: 5.5 N/cm <sup>2</sup> Tested with <b>VELCRO® Brand Hook 058 FR</b>
 <b>Cycle Life</b> EN-1414	50% of the minimum performance, 5,000 cycles Tested with <b>VELCRO® Brand Hook 058 FR</b>
 <b>Tensile Strength</b> EN-ISO 13934-1	Minimum: 210 N/cm Average: 240 N/cm

<sup>2</sup> The average values are only for reference. Suitable performance for a specific intended application should be evaluated by the user.

**PRODUCT COMBINATIONS**

The **VELCRO® Brand Loop 010 FR** has been designed to be used with the **VELCRO® Brand Hook 058 FR** and the **VELCRO® Brand adhesives range**.

**SPECIAL CHARACTERISTICS**

**Fastening system**

**VELCRO® Brand Loop 010 FR**



**Shrinkage**  
EN-ISO-6330/EN 12243

Maximum 4% after 3 washes at 60°C



**Colour Tolerance**  
dE (CMC)

$\Delta E \leq 2.0$



**Fire resistance**  
FAR 25.853  
Vertical Test: 12 s.

Burn length  $\leq 203\text{mm}$   
Flame time  $\leq 15\text{sec}$   
Drip flame time  $\leq 5\text{sec}$



**Fire resistance**  
FMVSS 302  
Burn rate (mm/min)

Self-Extinguishing (SE)



**Smoke Density & Toxicity**  
Test - ABD0031

Smoke Density: Acceptance Criteria Maximum Optical Density after 4 min  $\leq 200$  for flaming and non-flaming mode  
Toxicity: Acceptance Criteria below limit requested by substance



**Fire resistance**  
EN-ISO 11612:2015

Test according to ISO 15025, Procedure A & after 5 washes at 30°C sewn over a standard aramid fabric.  
Post- After flame (s)  $\leq 2$  s  
**After-glow time (s)  $\leq 2$  s**



**Fire resistance**  
EN-ISO 14116:2015

Test according to ISO 15025, Procedure A & after 5 washes at 30°C sewn over a standard aramid fabric.  
Classification limited flame spread Index: 3



**Temperature Resistance**  
ISO 17493

Product functional after 5 min at 180°C



**OEKO-TEX®**  
STANDARD 100 Class I



## ADDITIONAL PERFORMANCE CHARACTERISTICS



### Outdoor use

Since the product is made with polyamide, which has a known tendency to degrade in UV light, the **VELCRO® Brand Loop 010 FR** is not recommended for direct, prolonged exposure to UV light.



### Resistance to solvents

The polyamide in this fastening system is resistant to cleaning with some solvents and to accidental exposure to common solvents, but any such exposure must not be prolonged (except for strong acids, which hydrolyse it).

Its resistance to fluids used in transport, such as gasoline, motor oil or transmission fluids, has not been tested. We recommend testing the product for its specific application.



### Fire resistance

The **VELCRO® Brand Loop 010 FR** does have flame-retardant properties. Please, see information related flammability properties in 'Special Characteristics'.



### Water/Moisture resistance

The polyamide in this fastening system degrades its mechanical properties when exposed to water/high humidity (>80% RH) for long periods of time. These properties are typically recovered when the product dries.



### Sterilisation

These products have not been tested for physical sterilisation (autoclave, steam, gamma rays, etc.) or chemical sterilisation (ethylene oxide, hydrogen peroxide, etc.).



### Colour fastness

The **VELCRO® Brand Loop 010 FR** guarantees the following colour fastness:

Colour fastness to rubbing (ISO 105 X-12): Min. 4

Colour fastness to water (ISO 105 E-01): Min. 4

Colour fastness to sea water (ISO 105 E-02): Min. 4

Colour fastness to perspiration (ISO 105 E-04): Min. 4

Colour fastness to artificial light (ISO 105-B-02): Min. 5 (dark colours); min. 4 (white and light colours); min 3 (fluor colours)



### Biocompatibility

The **VELCRO® Brand Loop 010 FR** has not been tested for biocompatibility.



### Electrostatic discharge

The **VELCRO® Brand Loop 010 FR** has not been tested for electrostatic discharge after opening and closing the fastener. These products must first be tested in applications where electrostatic discharge is a concern.



### Seam strength

The **VELCRO® Brand Loop 010 FR** can be applied to several substrates by sewing. A square stitch should be used when possible, but all common stitches also offer adequate strength. The choice of thread will depend on the application and substrate.

## SUGGESTED APPLICATIONS

The **VELCRO® Brand Loop 010 FR** can be used in a wide variety of fire resistance applications such as:

**TRANSPORTATION:**



Automotive interior & accessories, carpet fixation, seat trim covers, aircraft seating.

**MEDICAL:**



Orthopaedics braces, gowns.

**PACKAGING:**



Returnable packaging applications.

**FOOTWEAR & APPAREL:**



Military uniforms, fashion & sport garments, workwear, shoes & ski boots.

**INDUSTRIAL & CONSTRUCTION:**

Panel fixation, signage cable management, furnishing & curtains, tents, sports equipment.



We recommend testing the product before use since the conditions specific to each application may cause differences in performance.



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**COUNTRY OF ORIGIN**

SPAIN

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**REGULATORY ELEMENTS**

For product declarations of conformity on regulatory elements and additional information, contact [productcompliance\\_emea@velcro.com](mailto:productcompliance_emea@velcro.com).

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**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.

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**LIMITED WARRANTY**

Velcro Companies<sup>(\*)</sup> warrants that all of its products will substantially comply with its written specifications at the time of shipment. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. The product user is responsible for determining whether the product is fit and suitable for the intended application. If the product does not meet specifications as warranted, we will, at our option, repair or replace the product, or credit or refund the purchase price. The foregoing constitutes the user's sole remedy and our sole obligation hereunder.

(\*) Velcro Companies includes all the partner companies involved in the development, manufacture or sale of the products.

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To the maximum extent permitted under applicable law, our liability for any losses or damages relating to use of the product shall not exceed the purchase price for such product, regardless of whether such losses or damages are direct, indirect, special, incidental or consequential, and regardless of the legal theory asserted, including, but not limited to, warranty, contract, negligence or strict liability.

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