

VELCRO® Brand

## HI-TEMP™ Hook 82 & Loop 5000

Technical Data Sheet

August 2022

### PRODUCT DESCRIPTION



The VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000 fastener system is a resistant and durable textile hook and loop suitable for those applications where high temperature, fire & chemical resistance and electrical insulation are important in demanding and aging performance environments. It is woven from 100% polyphenylene sulfide yarn and meets different Flame Retardancy standards.

The VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000 is suitable for a wide range of applications in various demanding industries such as aviation, automotive, industrial, and many others.






Available in natural colour, multiple widths, converted items and compatible with application methods such as sewing.

### PRODUCT CONSTRUCTION

Fastening system	VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	
Construction	Woven Textile Tape	
Composition	Polyphenylene sulfide	
Thickness	Sew On - Mated Avg. = 3.2mm - 0.126in	
Weight (Mass per Unit Length)	Hook 82 Sew On Avg. = 408 g/m <sup>2</sup> 5.8 <sup>e</sup> -4 psi	Loop 5000 Sew On Avg. = 423 g/m <sup>2</sup> 6.0 <sup>e</sup> -4 psi
Widths available*	12.5, 20, 25, 50 mm ± 1.6 mm 0.5, 0.75, 1, 2 in ± 0.06 in	
Colour available	Natural colour: pearl	

\* Other widths capabilities upon request

### PERFORMANCE CHARACTERISTICS

Fastening system	VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	
 Closure Peel Strength EN-12242	Minimum: 1.3 N/cm - 0.74 lbf/in Average: 1.6 N/cm* - 0.91 lbf/in Tested with VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	
 Closure Shear Strength EN-13780	Minimum: 8 N/cm <sup>2</sup> - 11.6 psi Average: 11.4 N/cm <sup>2</sup> * - 16.5 psi Tested with VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	
 Maximum Force EN-ISO 13934-1	Minimum Hook: 200 N - 45 lbf Loop: 180 N - 41 lbf	Average Hook: 571 N - 128 lbf Loop: 443 N - 100 lbf
 Elongation at maximum force EN-ISO 13934-1	≤ 50% Tested with VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	
 Cycle Life EN-1414	50% of the minimum performance after 500 cycles Tested with VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000	

\* 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 HI-TEMP™ Hook 82 & Loop 5000** fastener has been designed to be in combination with each other and be used with the VELCRO® Brand adhesives range.

## SPECIAL CHARACTERISTICS\*

Fastening system **VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000**



**Flame Retardancy**  
**AITM2-0053**

PASS



**Flammability**  
**12 Second Vertical**

FAR 25.856 (b)

FAR 25.853



**Flammability**  
**60 Second Vertical**

FAR 25.856 (a)

FAR 25.853



**Temperature**  
**Resistance**  
**ISO 17493**

Product functional after 5 min at 260°C



**Electrostatic**  
**properties**  
**EN 1149-3:2004: III**

Inductive charging method to determine charge dissipation: NO PASS



**Flammability** of  
**Plastic Materials\***  
**UL94/ EN 60695-11-10**

Vertical 0 Rating (V-0)\*

\*Testing per UL94:2006; UNE-EN 60695-11-10:2000/A1:2004 equivalent to EN 60695-11-10:1999/A1:2003 included as a reference. This product is not currently certified.

## ADDITIONAL PERFORMANCE CHARACTERISTICS



### Outdoor use

**VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** fasteners have not been tested for resistance to UV light. Polyphenylene sulfide material will become brittle and yellow with exposure to UV light. The product should be tested in use for a specific application.



### Resistance to solvents

The **VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** 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.



### Fire resistance

The **VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** has higher levels of flame retardancy versus standard fire retardant hook and loop fastener.

Please, see related flammability properties in 'Special Characteristics' sections.



### Water/Moisture resistance

Polyphenylene sulfide material has low affinity for water absorption for that reason performance should be stable when it is exposed to water/high humidity (> 80% H.R.) for extended lengths of times.



### 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**

No relevant information available.

**Biocompatibility**

The **VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** has not been tested for biocompatibility.

**Electrostatic discharge**

The **VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** 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 HI-TEMP™ Hook 82 & Loop 5000** 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. Product is intended for use on thermo-acoustic insulation applications and has not been designed or evaluated for performance in clothing or durable high use textile constructions such as fire-fighter turnout gear.

**SUGGESTED APPLICATIONS**

**VELCRO® Brand HI-TEMP™ Hook 82 & Loop 5000** fasteners may be used.

**INDUSTRIAL:**

Thermal insulation mattresses in different industries, electronic sensors, industrial high temperature equipment, HVAC installations.

**TRANSPORTATION:**

Aircraft seating or interior composite structured, maintenance and repair of aircraft thermo-acoustic insulation systems.

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

**COUNTRY OF ORIGIN**

United States

**REGULATORY ELEMENTS**

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

**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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