



## Viking Needlepunch/Felt Textiles Overview

Viking Needlepunch, also referred to as felt textiles, is a process where fibers are mechanically interlocked using barbed needles to create nonwoven fabrics. This versatile method produces materials with a wide range of properties, such as durability, absorbency, and flexibility, depending on the fibers and treatments used. These textiles are used in industries requiring high-performance materials that meet specific functional requirements.



## Key Characteristics



### DURABILITY

Highly resistant to wear and tear, ensuring long-lasting performance.



### VERSATILITY

Can be designed to meet a variety of needs, such as moisture absorption, heat resistance, or chemical resistance.



### CUSTOMIZABILITY

Available in various thicknesses, weights, and finishes to suit diverse applications.



### ECO-FRIENDLY OPTIONS

Can incorporate recycled or sustainable fibers.



### COST-EFFECTIVE

Efficient production processes make these textiles an economical solution for many industries.

## Features

Acme Mills offers premium needlepunch textiles designed to provide advanced solutions across various industries. Our felt textiles feature:




- ✓ **High-Quality Fibers:** Selected for optimal performance, including natural, synthetic, and blended options.
- ✓ **Precision Engineering:** Consistently produced to meet stringent quality standards.
- ✓ **Specialized Treatments:** Enhanced functionality through heat setting, calendaring, or chemical treatments.
- ✓ **Custom Solutions:** Tailored to meet the exact specifications of each application.



## Applications






### MEDICAL & PHARMACEUTICAL

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**Filtration Media:** Used in medical-grade filtration systems for clean air and liquids.
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**Sterile Packaging:** Nonwoven materials for contamination-resistant packaging.
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**Support Padding:** Comfortable and durable materials for orthotics, braces, and cushions.






### MILITARY

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**Ballistic and Protective Gear:** Reinforcement layers for body armor and helmets.
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**Equipment Covers:** Durable, weather-resistant covers for sensitive equipment.
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**Vehicle Interiors:** Nonwoven linings for improved durability and insulation.






### CONSTRUCTION

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**Geotextiles:** Reinforcement materials for erosion control and soil stabilization.
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**Roofing Underlayments:** Moisture-resistant layers to enhance roof durability.
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**Acoustic Insulation:** Noise-dampening materials for walls and ceilings.






### CHEMICAL INDUSTRY

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**Filter Media:** Chemical-resistant textiles for air and liquid filtration.
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**Protective Linings:** Nonwoven linings for chemical storage and transport.
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**Industrial Pads:** Abrasion-resistant pads for heavy machinery.






### FOOD AND BEVERAGE

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**Processing Mats:** Sanitary and heat-resistant materials for food production lines.
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**Filter Media:** Used in beverage production for precise filtration requirements.
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**Packaging Solutions:** Breathable, protective layers for perishable goods.



### AUTOMOTIVE

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**Seating:** Durable, moisture-resistant layers for seat covers and cushions.
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**Acoustic Panels:** Noise-reducing materials for vehicle interiors.
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**Thermal Insulation:** Heat-resistant materials for engine compartments.



### ADDITIONAL INDUSTRIES

- ⚙️ **Aerospace:** Lightweight, fire-retardant materials for aircraft interiors.
- ⚙️ **Furniture:** Upholstery padding and linings for enhanced durability.
- ⚙️ **Sports Equipment:** Shock-absorbent padding for protective gear.
- ⚙️ **Public Transit:** Long-lasting seat covers for buses, trains, and other public vehicles.

## Why Choose Acme Mills for Needlepunch/Felt Textiles?

Acme Mills delivers trusted textile solutions, backed by over a century of innovation and expertise. Key benefits include:



#### PROVEN RELIABILITY

Serving global industries with consistent and high-performance materials.



#### CUSTOM TAILORING

Offering specialized designs to meet the unique demands of every sector.



#### ECO-CONSCIOUS OPTIONS

Supporting sustainability with recyclable and renewable fiber choices.



#### INDUSTRY PARTNERSHIPS

Collaborating with leading brands to develop groundbreaking applications.



## Case Study

### Custom T-Top Protective Bag

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**Summary:** Acme Mills partnered with American Sunroof Corporation and Webasto Sunroofs to develop a protective bag for convertible T-tops, focusing on durability and cushioning to safeguard the panels during storage and transport.

### Project Specifications

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- ⚙️ **Material Supplied:** Custom-engineered felt fabric, designed to provide both strength and cushioning, ensuring the T-top panels are protected from scratches and impacts.
- ⚙️ **Application:** Crafted into protective bags tailored for convertible T-top panels, offering a snug fit and ease of use for end customers.
- ⚙️ **Quantity:** Produced in quantities aligning with the production schedules of American Sunroof Corporation and Webasto Sunroofs, ensuring timely availability for each T-top unit.
- ⚙️ **Delivery Schedule:** Coordinated with the clients' manufacturing timelines to ensure seamless integration into their distribution processes without delays.

### Capacity and Scalability

Acme Mills demonstrated the ability to scale production efficiently, accommodating the increasing demands of both American Sunroof Corporation and Webasto Sunroofs. The company's advanced manufacturing capabilities enabled it to handle substantial orders while maintaining stringent quality standards.



## Manufacturing Details

### MATERIAL SELECTION AND PREPARATION

Acme Mills selected high-quality felt known for its durability and cushioning properties.

The material was then prepared to meet the specific dimensions and requirements of the T-top panels.



### PRODUCTION PROCESS

**Cutting:** Utilized precision cutting techniques to ensure each piece of felt met the exact specifications required for the protective bags.

**Sewing:** Employed skilled sewing techniques to assemble the bags, ensuring strong seams and a perfect fit for the T-top panels.

**Finishing:** Applied finishing touches to enhance the durability and appearance of the bags, including quality checks for consistency.



### QUALITY CONTROL

**Material Testing:** Conducted tests to ensure the felt met industry standards for strength and cushioning.

**Dimensional Checks:** Verified that each bag conformed to the precise dimensions required for a snug fit.

**Functional Testing:** Assessed the ease of inserting and removing the T-top panels to ensure user convenience.





## Uses and Applications

The custom felt protective bags offer several advantages:



### ENHANCED PROTECTION

The felt material provides a soft yet durable barrier, preventing scratches, dents, and other potential damages during handling and storage.



### EASE OF HANDLING

Lightweight and designed for user-friendliness, the bags allow customers to easily store and transport their T-top panels.



### AESTHETIC APPEAL

The high-quality felt offers a premium look and feel, enhancing customer satisfaction with the overall product experience.

Through the development of custom felt protective bags, Acme Mills successfully provided American Sunroof Corporation and Webasto Sunroofs with a solution that enhanced the protection and customer experience of their convertible T-top panels. This collaboration underscores Acme Mills' commitment to delivering high-quality, tailored textile solutions that meet the specific needs of its clients.

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## Contact Acme Mills

Need assistance in maximizing manufacturing efficiencies to ensure quality and optimize costs? Call or email us today and one of our skilled team members will lead the way. (800) 521-8565 ~ [info@acmemills.com](mailto:info@acmemills.com)