DEFENDER™

HEAT FELTS

HIGH TEMPERATURE HANDLING PRODUCTS

www.defenderheatfelts.com

Albarrie Industrial Fabrics
Toll-free: 1.866.269.8275
Email: apcfabrics@albarrie.com
Web: www.albarrie.com

Albarrie
Advanced Textiles for the Future
Albarrie Canada Limited is a leading textile manufacturer specializing in the production of technical needlepunch felts for industrial applications. For over 35 years, Albarrie has been supplying the aluminum extrusion industry with its Defender™ Heat Felts product line to protect the critical surface of the aluminum as it moves through the extrusion process. The Defender™ Heat Felts product line includes Fullback Rollers, Separator Rollers, Roller Covers, Felt Pads, Durafiber Boards, Endless Belts, Nomex® Felt Tape, and Spacer Bar Sleeves made from an assortment of technical felts such as Kevlar®, Nomex®, and PBO. With in-house custom fabrication and textile production, Albarrie is an all-in-one supplier for your high temperature technical felt requirements.

Fullback Rollers
The ultimate compressed Kevlar® Roller for the aluminum extrusion industry is ideal for use on lead-out tables, run-out tables, and quench tanks in place of graphite, steel, or lightweight roller covers. Its unique high compression Kevlar® felt design provides superior protection for the aluminum profile and unsurpassed durability. Great for heavy weight profiles, difficult access areas, and high temperature applications. Precision made and custom fabricated to your specifications.

- **Ultra High Density**
  - Fabric: 100% Kevlar® Felt
  - Application Areas:
    - Lead-Out Tables
    - Quench Tanks
    - Run-Out Tables
  - Temperature Range: up to 1000°F
  - Diameter Starting at 7/8”
  - Options:
    - Stainless Steel (for quench tanks)
    - Fixed Shaft
    - Concave/Tapered

Separator Rollers
These small diameter rollers are based on the same high compression design as the Fullback Rollers but are intended to provide separation and protection of the aluminum profiles on the lead-out table when using multi-cavity dies. These rollers are commonly inserted vertically in slots in the lead-out table to ensure the profiles run straight and true from the press to the surface of the run-out table eliminating the need for stacking and blocking with graphite slabs.

- **Ultra High Density**
  - Fabric: 100% Kevlar® Felt
  - Application Areas:
    - Lead-Out Tables
    - Quench Tanks
    - Run-Out Tables
  - Temperature Range: up to 1000°F
  - Diameter Starting at 7/8”
  - Options:
    - Fixed Shaft
    - Internal Bearings
    - Stainless Steel

Roller Covers
Albarrie’s Defender™ Roller Covers are formed using a spiraled needlepunch process to create an extremely uniform seamless felt tube. Several fabric and coating combinations are available. Each Roller Cover is made to order ensuring a precise fit in accordance with your existing roller specifications.

- **Seamless Tube Design**
  - ID: 33mm to 127 mm
  - Wall Thickness 4mm to 10mm
  - Application Areas:
    - Lead-Out Tables
    - Quench Tanks
    - Run-Out Tables
  - Materials:
    - PBO/Kevlar®
    - Kevlar®
    - Nomex®
    - Polyester
  - Economical
  - Easy to Install

Available in Resin Treated
High Temperature Handling Products

Albarrie’s Defender™ Felt Pads are used in place of graphite and wood on lead-out tables, conveyors, lift over arms, and walking beams to protect surface finish and minimize marking. Available in a variety of high and low temperature felts in various thicknesses to suit your needs. Coatings and PSA’s are available on most styles. Pads are available in rolls or as cut pieces. Albarrie’s Durafiber Boards start as Felt Pads using a proprietary manufacturing process, treated to become stiff and rigid, with many similarities to lumber. This treatment increases the compressive and tensile strength of Felt Pads while reducing the hygroscopicity. These boards can be shaped, drilled, countersunk, and cut to replace the most complex shapes replacing both graphite and wood in the aluminum extrusion handling system.

- Protect Surface Finish  
- Replaces Graphite/Wood  
- Variety of Styles

**Application Areas:**
- Walking Beams
- Standing Beams
- Transfer Arms

**Materials:**
- PBO/Kevlar®
- Kevlar®
- Nomex®
- Polyester

**Options:**
- V-Guides

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Albarrie’s Defender™ Endless Belts are manufactured using an endless needlepunch process to produce the finest felt cooling belts available without any seams to fray or separate. Produced under tension, these belts offer minimal stretch and improved durability. Available in a variety of different felt materials with optional base coatings and guides to match the requirements of your handling system.

- No Seams (endless)  
- Excellent Durability  
- Minimal Stretch

**Application Areas:**
- Cross-Over
- Batching
- Transfer
- Cooling

**Materials:**
- PBO/Kevlar®
- Kevlar®
- Nomex®
- Polyester

**Options:**
- V-Guides

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Albarrie’s Defender™ Nomex® Felt Tape is highly successful at protecting aluminum from scratching and marking throughout various stages of the extrusion process; thanks to its unique combination of heat protection and durability. With high operating temperatures it is ideal for lining storage racks and age oven carts. The soft yet durable grade of Nomex® felt is inherently fire resistant and capable of withstanding temperatures up to 450°F (230°C). Several different widths are available in stock. Custom widths may be ordered at no extra charge.

- Excellent Temperature Resistance  
- Cut to Exact Lengths

**Application Areas:**
- Carts or Racks
- Seals and Gaskets

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Albarrie’s Defender™ Spacer Bar Sleeves are used to protect the extruded aluminum profile during aging and transport by separating the layers of aluminum as they are stacked. Defender™ Spacer Sleeves are made from top quality mid-temperature felts that are custom fabricated into sleeves with either sewn or welded seams to receive your spacer bar. NEW - Shrink Sleeves will shrink with heat around the spacer bar to ensure a tight fit. Great for auto-stacking equipment.

- Soft & Smooth Surface  
- Durable & Cut Resistant  
- Custom-Made

**Materials:**
- Nomex®
- Shrink Sleeve
- Polyester

**Options:**
- Welded or Sewn Seams
- Open Both Ends
- Closed One End

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**FIBER PROPERTIES**

<table>
<thead>
<tr>
<th>FIBER TYPE</th>
<th>TENSILE STRENGTH</th>
<th>ABRASION RESISTANCE</th>
<th>OPERATING TEMP °F/°C</th>
<th>DECOMPOSITION TEMP °F/°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBO</td>
<td>Excellent</td>
<td>Very Good</td>
<td>1020/550</td>
<td>1200/650</td>
</tr>
<tr>
<td>Kevlar®</td>
<td>Excellent</td>
<td>Very Good</td>
<td>840/450</td>
<td>975/525</td>
</tr>
<tr>
<td>Polyox</td>
<td>Fair</td>
<td>Fair</td>
<td>500/260</td>
<td>600/315</td>
</tr>
<tr>
<td>Meta-Aramid</td>
<td>Very Good</td>
<td>Very Good</td>
<td>450/230</td>
<td>750/400</td>
</tr>
<tr>
<td>PPS</td>
<td>Good</td>
<td>Good</td>
<td>430/220</td>
<td>500/260</td>
</tr>
<tr>
<td>Polyester</td>
<td>Good</td>
<td>Very Good</td>
<td>300/150</td>
<td>500/260</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>Good</td>
<td>Good</td>
<td>190/90</td>
<td>320/160</td>
</tr>
</tbody>
</table>

Contact your local Albarrie Representative for assistance with fiber selection and specific application instructions.

Phone: 705.737.0551 • Toll Free: 1.866.269.8275 • Fax: 705.737.4044

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The above chart is intended for reference purposes only as a guideline for the use of high temperature felts in the aluminum extrusion industry in accordance with Albarrie's application instructions. The information contained therein reflects data provided by fiber suppliers under specific and controlled conditions and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. Albarrie makes no representation, warranty or guarantee as to the accuracy, reliability or completeness of the above data. The end user is ultimately responsible for determining fitness of application of this product prior to use. Albarrie does not accept liability for any loss or damage that may occur from the use of this information or do we offer any warranty against infringement.