



Building Our Journey Together

Innovative Products For Our Customers

CONFIDENTIAL

A decorative header consisting of a row of blue squares of varying shades, followed by a 3x3 grid of lighter blue squares on the left side.

Agenda

- FXI Overview
- Core Competencies
- Functional Expertise and Applications
- Fundamentals of Polyurethane Foam
- Development Process
- Summary

About FXI

- For over 60 years, FXI has led our industry forward, pioneering greater innovations and more applications for our amazing material.
- Along the way, we have registered over 400 patents and built one of the nation's largest foam manufacturing and distribution networks. Already recognized by customers and peers, we are committed to taking foam even further in the future.



Tailored Solutions for Our Partners

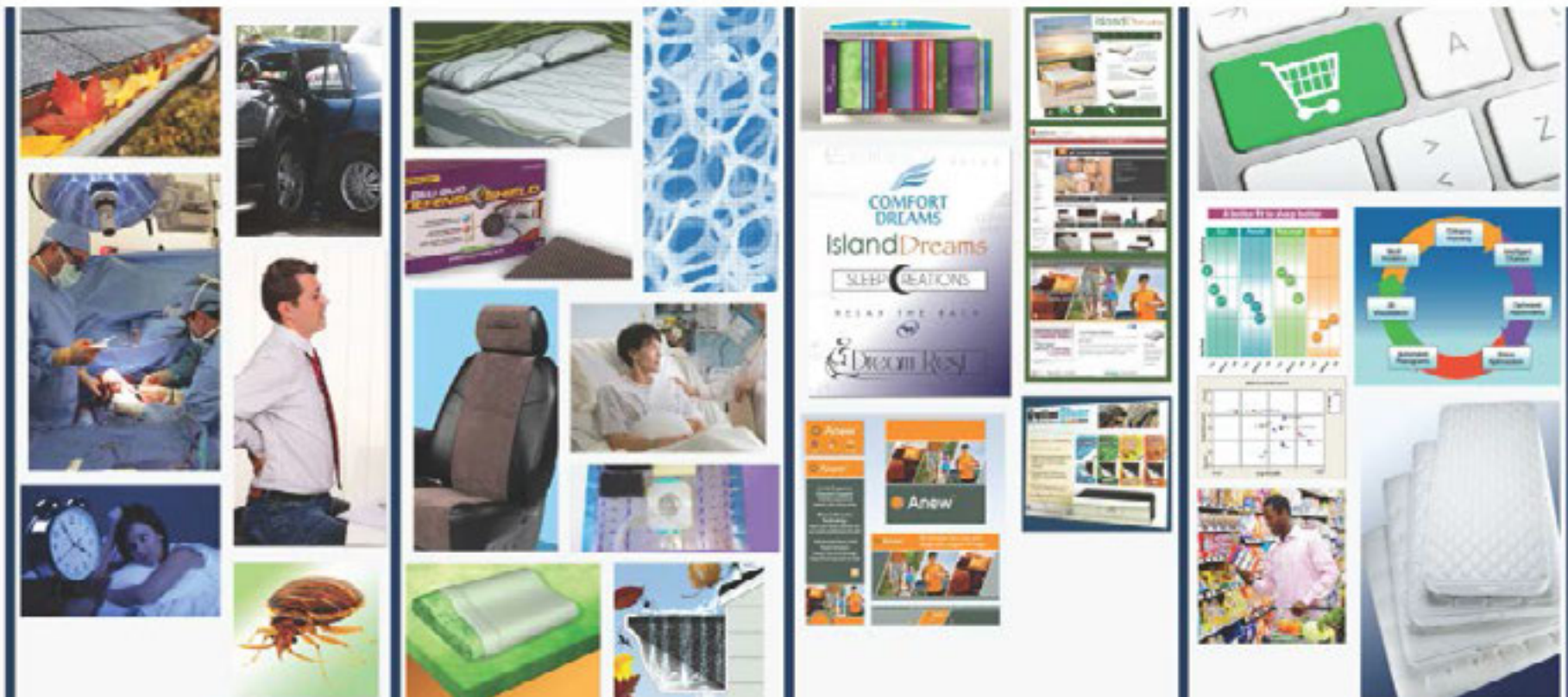
Solutions Driven by Innovation & Excellence

Consumer
Insights

Innovative
Products

Marketing
Solutions

Category
Management





FXI Mission . . . Tailored Solutions for our Partners Driven by Innovation and Excellence



Keys to Success

- Lowest Imaginable Cost by Eliminating Waste
- Innovation that Delights our Customers and Consumers
- Building a High Performance Organization

Core Values



The Industries We Serve . . . Inside, Around and Under



Automotive



Building Products



Home Furnishings



Bedding



Healthcare



Electronics

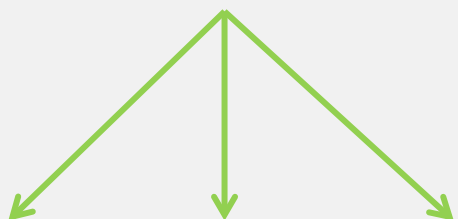


Cleaning

Polyurethane Foam Functions Fit into 2 Primary Categories

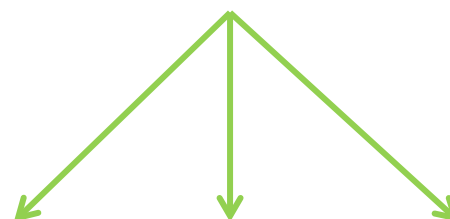
Fluid Management

- Organizing, directing or containing materials that are capable of flowing



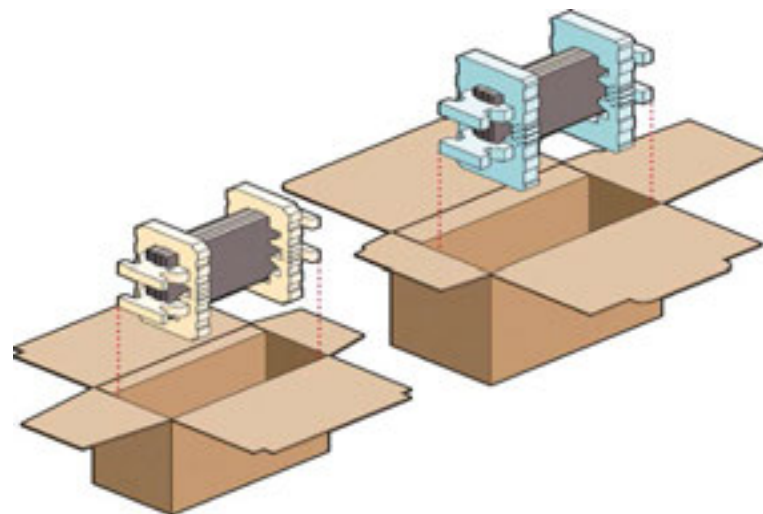
Energy Management

- Directing, controlling or handling of power derived from various sources



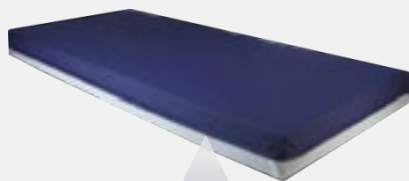
Energy Management is a Core Competency . . .

- Sound
- Mechanical – Cushion, Pressure Reduction, Protection
- Thermal – Temperature Regulation, Explosion Suppression
- Electrical



Cushioning

Healthcare



BodyZone

Bedding



BIOS™ Topper



Pet Bed



Sleep Creations™ Mattress

Tech



Dri-Fast™ outdoor seating

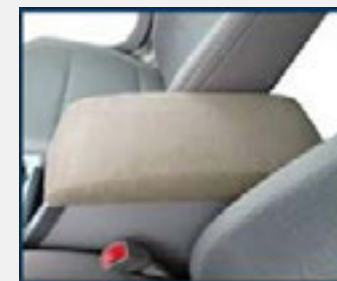


Disk drive – vibration damping

Auto



Car seats



Armrests



Headrests

Sound

Consumer



Speaker Grille



Headphones

Tech



Microphone covers



Anechoic Chamber

Auto



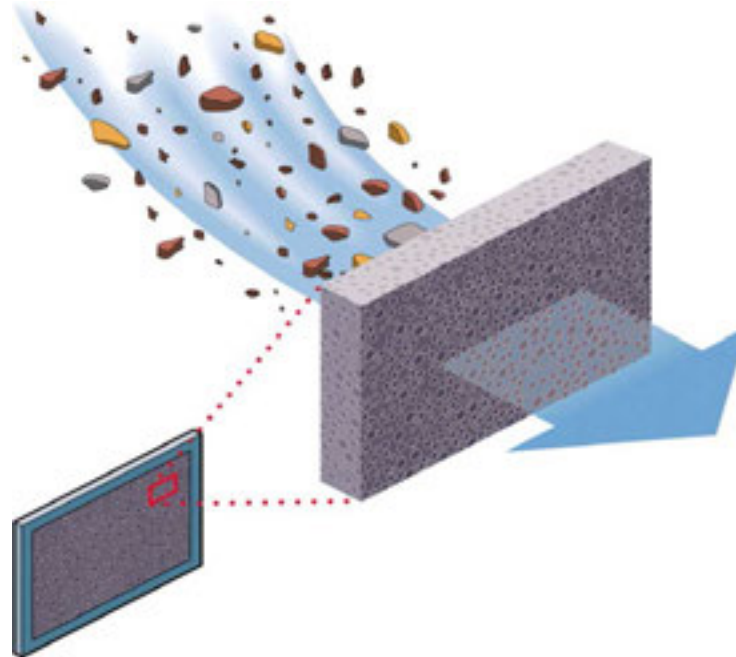
Headliners



Under Hood

Fluid Management is a Core Competency . . .

- Separate
- Store
- Deliver
- Isolate



Delivery Systems

Healthcare



Surgical Prep

EKG Leads



Toothettes Oral Swabs

Surgical Prep



Tech

Stamp Pads



Brushes & Rollers



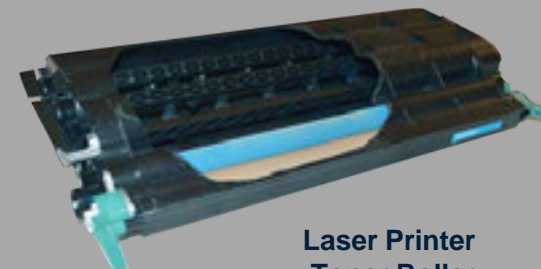
Cosmetic Applicators



Electronics



Inkjet Cartridge



Laser Printer Toner Roller

Filtering

Healthcare



Negative Pressure Wound Therapy

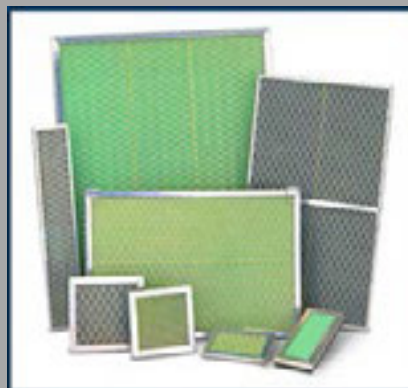


Blood Oxygenator

Tech



Water Filtration



HVAC Filters

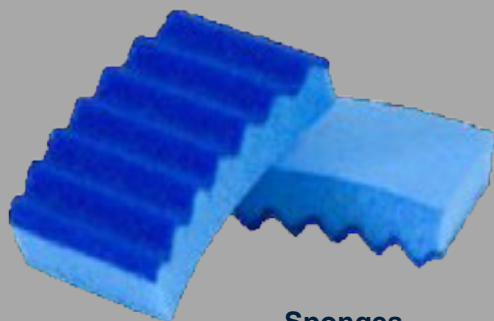
Auto



Air Filters

Cleaning

Consumer/Professional



Sponges



Wipes

Consumer/Professional



Mops



Dishwashing Tools

Auto



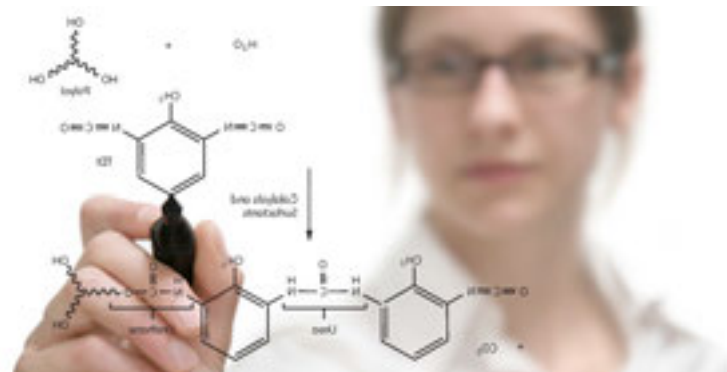
Car Wipes



Auto Buffing Pads

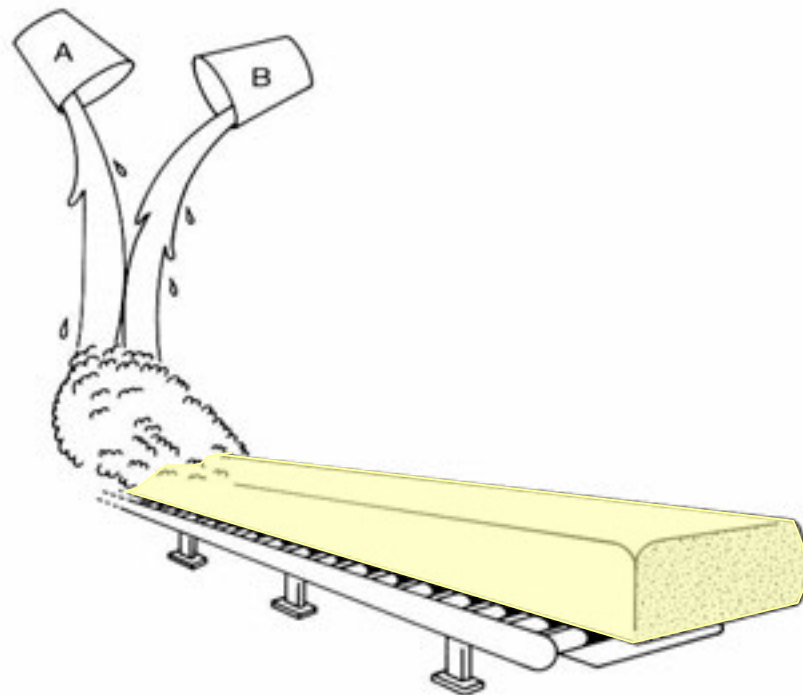
World Class R&D center supports continued innovation

- Research, design and development
- Rapid prototyping
- Raw material evaluations
- Commercialization support
- Technical service and trouble-shooting
- Comprehensive suite of test capabilities
 - Gas Chromatography – Mass Spectrometry (GC-MS)
 - Gel Permeation Chromatography (GPC)
 - Dynamic Mechanical Analysis (DMA)
 - Differential Scanning Calorimeter (DSC)
 - Thermal Gravimetric Analysis (TGA)



The formation of foam is a complex process involving two competing chemical reactions and a number of mechanical processes

- Polyurethane foams are produced according to the general scheme of mixing A with B to give an $(AB)_n$ block polymer
- The foam is expanded or “blown” by CO_2 gas as the cellular polymer cures or “gels”
- Conceptually think of it as making bread

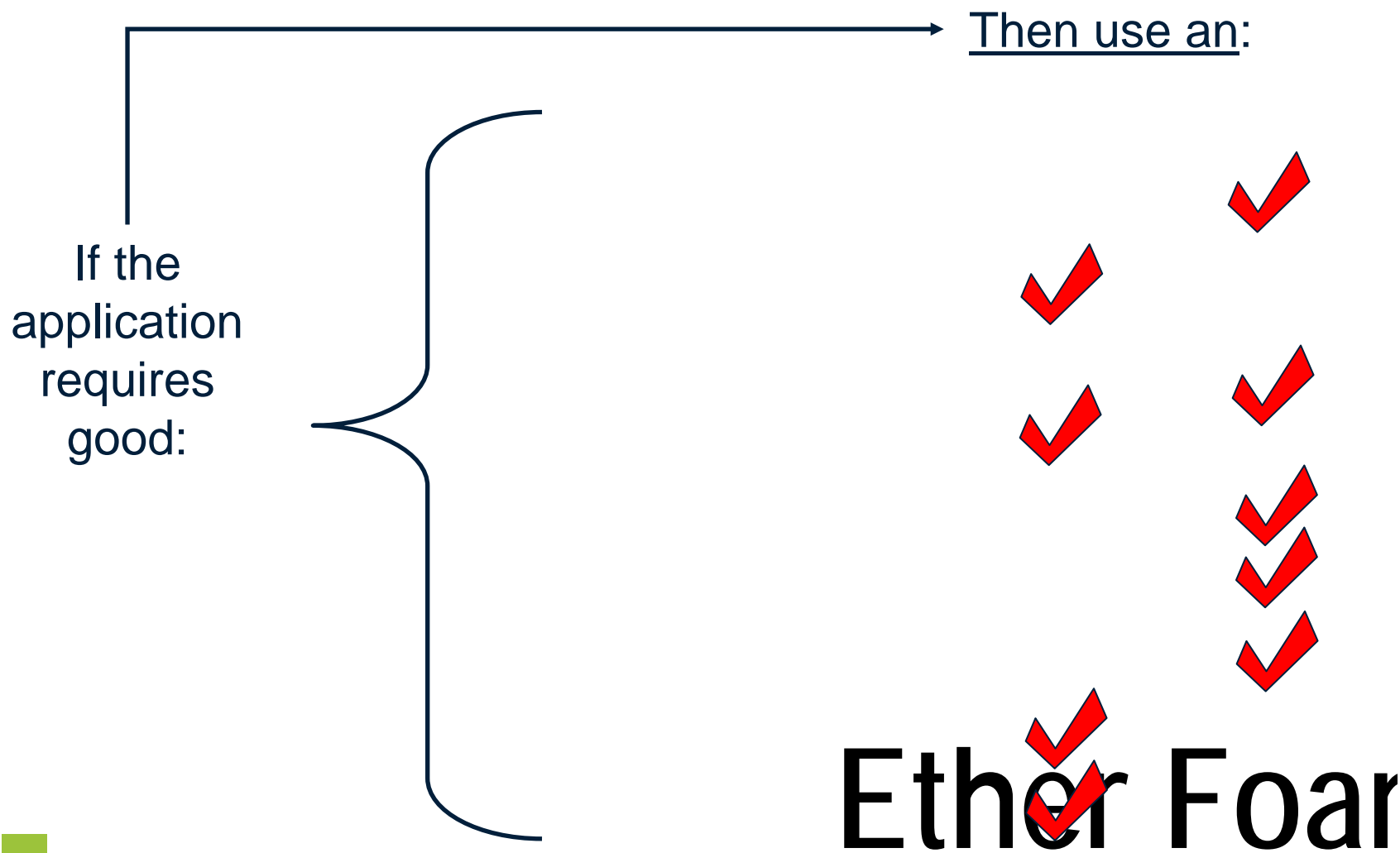


There are five major ingredients in all flexible slab-stock foam formulations . . .

- Polyols (50 - 70%)
- Isocyanates (25 - 40%)
- Water (1 - 4%)
- Catalysts (<1%)
- Surfactants (<3%)



A simplified grid of the benefits associated with the two polyurethane polymer backbones . . .





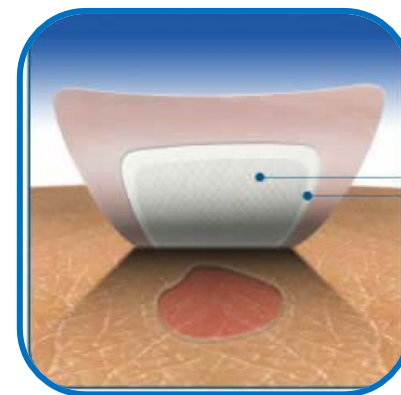
Beyond the basic polyurethane foams . . . FXI offers the broadest range of cellular polyurethane products



- Engineered Foams
- Chemically Modified Foams
- Physically Modified Foams

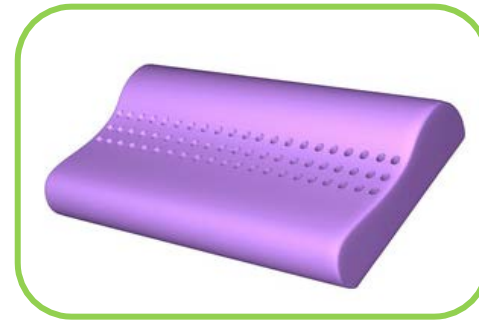
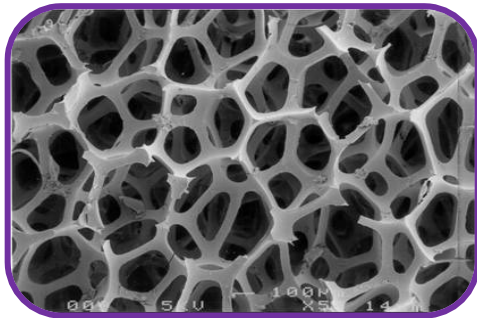
Performance enhancing manipulations involve Chemical Modifications through the addition of specialty additives

- Antimicrobials
- Absorbents
- Conductive Agents
- Hydrophilic/Hydrophobic
- Colorants
- Flame Retardants



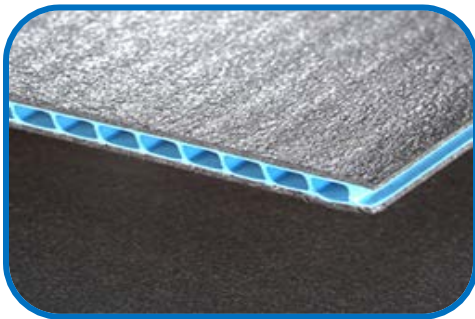
We further upgrade functionality using various Physical Modification techniques . . .

➤ Reticulation - Thermal or Chemical

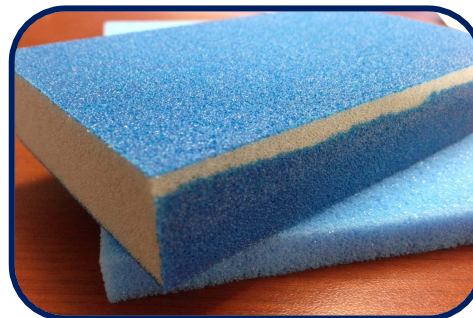


➤ Shaping or Sculpting-SMT

➤ Combination – Lamination



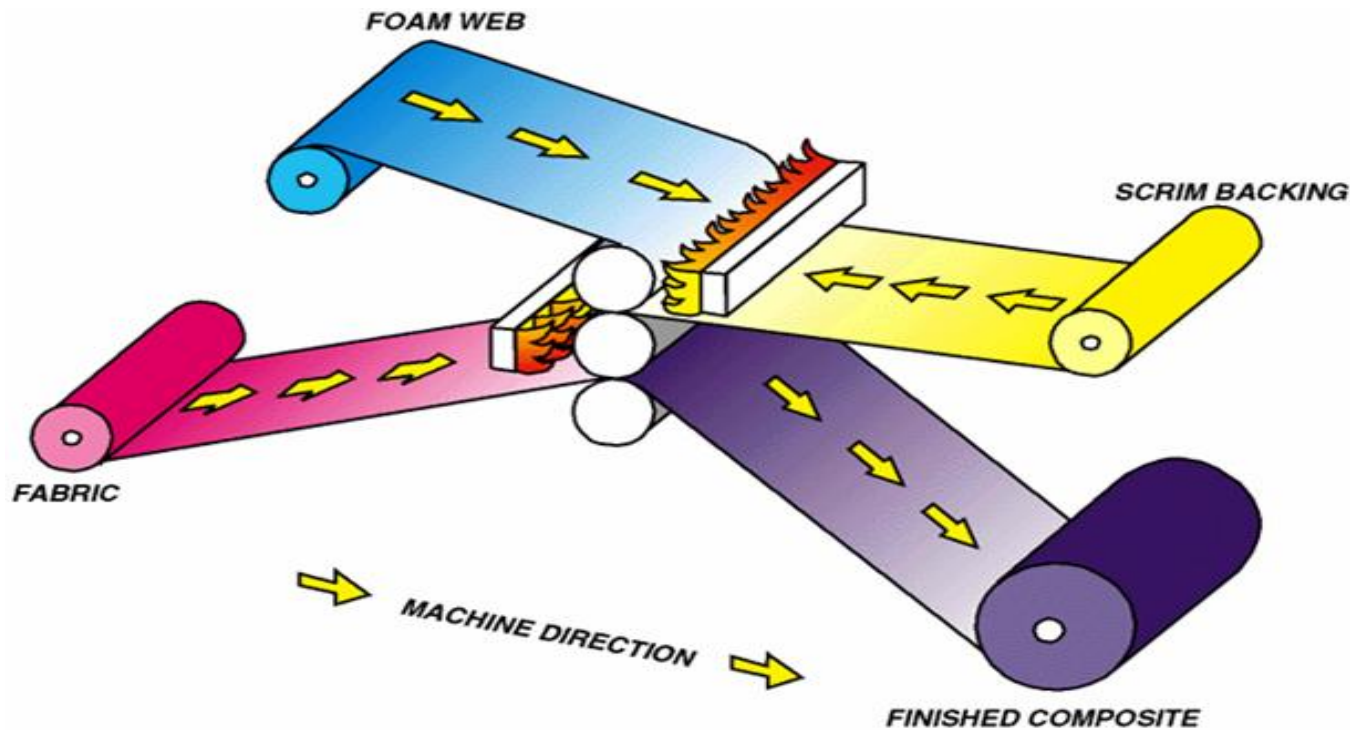
➤ Coating



➤ Compression – Felt

Lamination . . . The combination of two or three materials using a bonding agent to form a composite structure

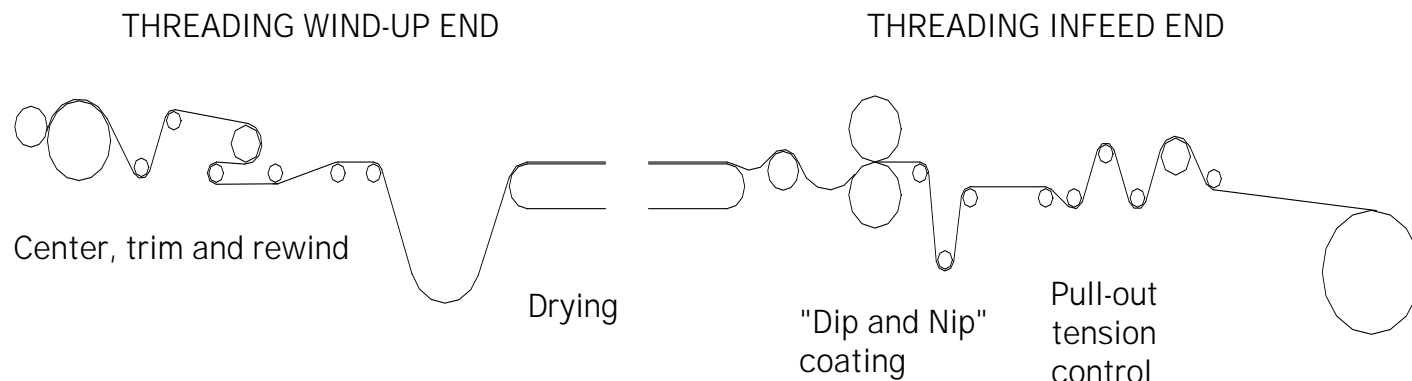
- Bonds foam to a substrate
- Flame-created, film, web or liquid adhesive
- Can create bi- or tri-laminates
- Substrates can be a film, non-woven, fabric or another foam



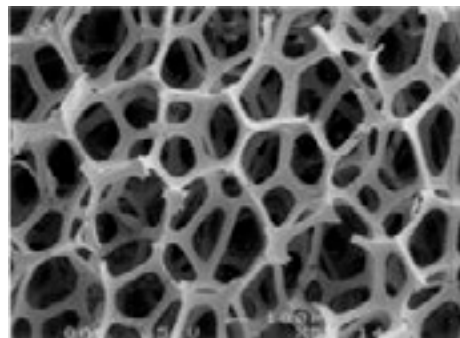
TRI-LAMINATE FLAME LAMINATOR

Coating . . . Completely covering the cellular polymer strands with an alternative material

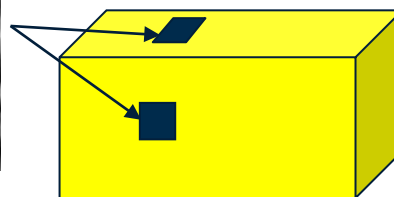
- “Dip and Nip” process to impregnate foam
- Coatings include – latex, PVC, acrylics, vinyl, activated and conductive carbon



Felting . . . Permanent compression of the foam to modify the cell structure for enhanced fluid control



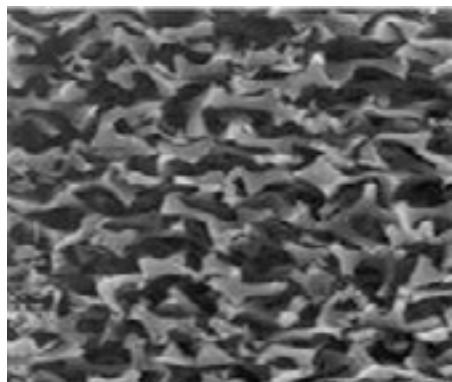
Uniform cell structure
in all directions



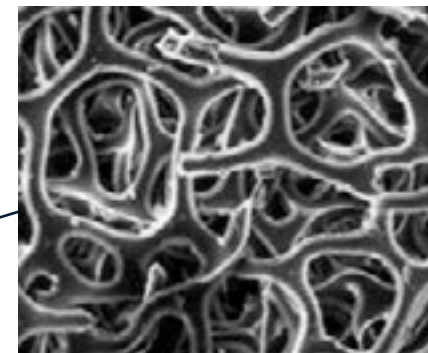
Before
Felting



Felting

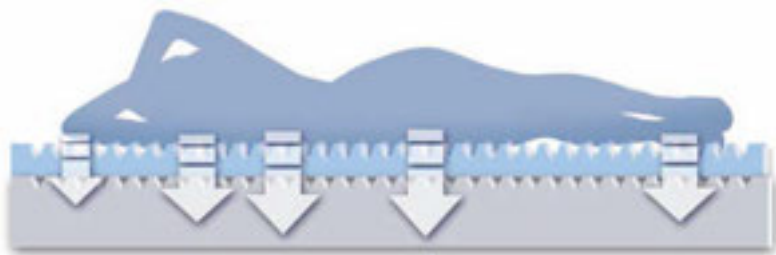


After
Felting



Cells appear flattened

Sculpting of the foam surface using the patented Surface Modification Technology (SMT) . . .

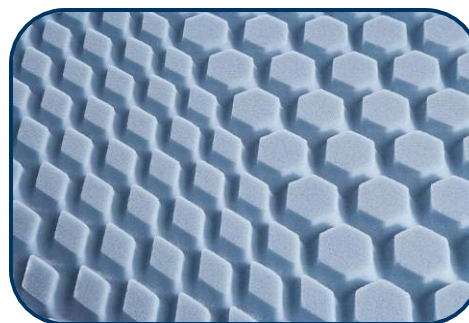


- Alters foam surface in up to five different ways
 - By pattern type, size, depth, spacing, and location

➤ Results

- Pressure redistributed
- Envelopment increased
- Friction and shear reduced
- Zoned cushioning layer
- Air circulation enhanced
- Comfort maximized

Five Pressure Redistribution Zones



Summary

- FXI is the leading supplier of polyurethane foam products
 - Buns to finished products
- Polyurethane foams have many diverse properties and offer an great choice for applications that involve fluid or energy management
- FXI has extensive manufacturing capabilities across North America
- Company is focused on providing innovative solutions for our customers/partners
- FXI offers the widest range of products to meet your business needs today and in the future