



# H.B. Fuller AHFA Formaldehyde Workshop

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**H.B. Fuller**

Connecting what matters.™



# Meet Our Team



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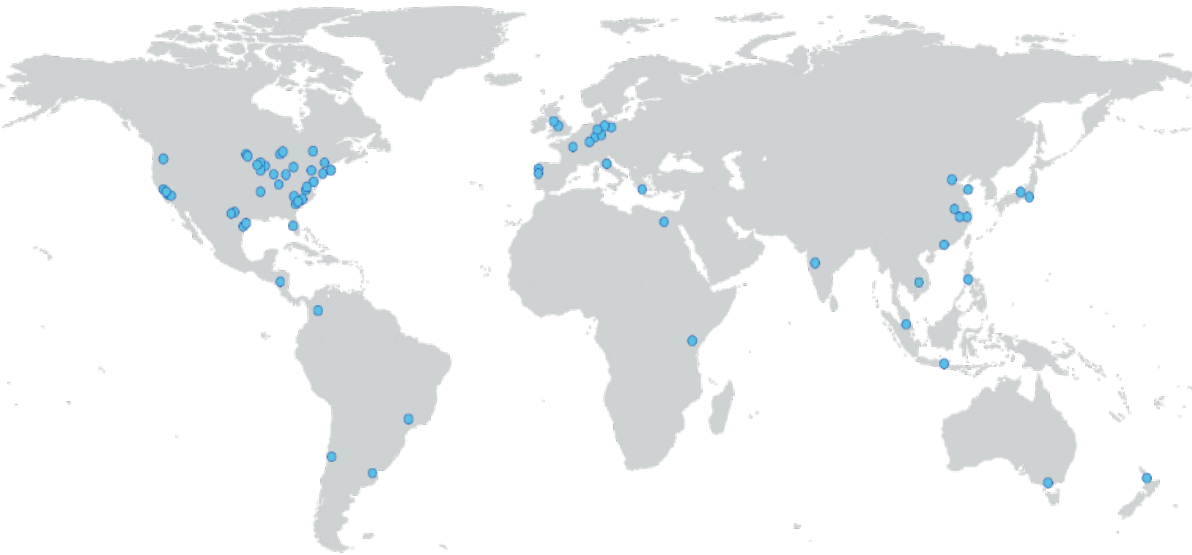


# Agenda

- Who is HB Fuller
- Our Brands and Markets
- HB Fuller Adhesives
- Support
- Why HB Fuller

# H.B. Fuller is a Global Market Leader in Adhesives

Global Reach. Local Expertise.



## Key Facts

**Global Headquarters:**  
St. Paul, MN, USA

**72 Manufacturing Facilities**  
**38 Technology Centers**  
**Direct Presence in 36 Countries**

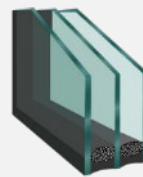
**\$2.8 Billion In Revenue**

**10,000 Adhesive Solutions**

**~6,500 Employees**

**Customers in 125 countries**

**H.B. Fuller (NYSE: FUL) – Connecting What Matters™**



# H.B. Fuller Product Lines





# H.B. Fuller – Markets We Serve

We offer solutions to customers in a variety of markets, including:

## Engineering



Aerospave &  
Automotive



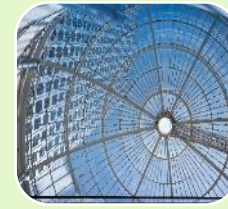
Durable  
Assembly



Electronics  
& Energy



BTRS & RV



Insulating  
Glass



Wood &  
Composite

## Hygiene, Health and Consumable



Packaging &  
Converting



Flexible  
Packaging



Health &  
Beauty



Polymer &  
Coatings



Specialties

## Construction



Commercial Roofing



Flooring



Utilities & Infrastructure

# HB Fuller Adhesives

- **Changes**
  - Formaldehyde restrictions increasing
  - New limitations and control
  - Transition from Fabricator to Panel Producer
- **Application Impacted**
  - Hot Press
  - Cold Press
  - Continuous Lamination
  - Radio Frequency Cure
  - Membrane press
  - Others
- **HB Fuller Benefits**
  - NAF Adhesives are the norm
  - Nearly all our adhesives are NAF (No Added Formaldehyde)
  - Replacing Formaldehyde products with NAF are application specific
  - Multiple Core Bonding technologies
  - In-depth Technical support



# Core Technologies

Our experts are continually perfecting adhesives to improve lives.



Reactive



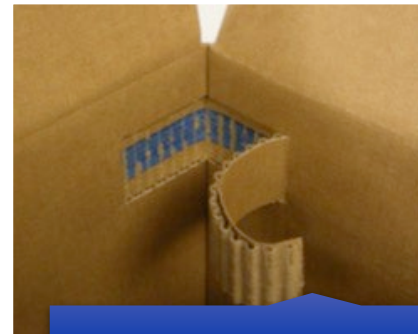
Water-based



Hot melt



Solvent-based



Adhesive-coated



# Engineering Adhesives – Product Toolbox

## Resin Chemistries

- Epoxy
- Acrylic
- Urethane
- Silicone
- Polyolefin
- Butyl
- Water based (PVAc & VAE)
- Solvent based

## Adhesive Formats

- Hot Melt
- PSA
- Reactive Hot Melt
- Films & Tapes
- 1K & 2K Liquid
- 1K & 2K Paste
- Anaerobic
- Cyanoacrylates

## Curing Options

- Heat
- Moisture
- UV/Vis. Light
- UV + Moisture
- UV + Thermal
- Mixing / 2K
- Activator
- PSA

## Functional Properties

- Water Resistance
- Cold Resistance
- Paintable
- Stainable
- Pot stability
- Etc.





## North America EA Technical Service – Support

- Visit to customer site
  - Identify key performance parameters
  - Identify test methods to validate performance
- Laboratory testing at our St. Paul, MN facility
  - Make laminations
  - Conditioning/accelerated aging testing
  - Quantitative evaluation of bond strength (i.e., Instron)
- Laboratory testing at our facility
  - Make laminations
  - Conditioning/accelerated aging testing
  - Quantitative evaluation of bond strength (i.e., Instron)
- Technical service to customer location for start-up to ensure process is running properly



# Regulatory and Certification

## Responsibilities of Global Regulatory Stewardship

### Internal Regulatory Compliances

- Governmental requirements for H.B. Fuller
- Example: Chemical Control Laws (CCLs), Dangerous Goods classifications, OSHA GHS Safety Data Sheets (SDS)

### External Regulatory Compliances/Certifications

- Customer requirements of H.B. Fuller's products
- Example: Proposition 65 chemical inquiries, RoHS/WEEE, IMDS,
- **NSF Filtration liaison**

### Health and Safety Inquiries

- Safe handling and usage of H.B. Fuller's products
- Example: Toxicological reviews, Industrial Hygiene reviews

Product Certifications

Chemical Control Laws

Food Safety

# Compliance



POLICIES



REQUIREMENTS



REGULATIONS



LAW



STANDARDS



TRANSPARENCY



RULES

Customer  
Focus

Technical  
Service

Values  
Driven



Market Expertise  
+ Innovation

Global Reach