



Mālama
COMPOSITES®

G R E E N T O T H E C O R E

ABDC Biomass Presentation

David Saltman, Chairman & CEO



www.malamacomposites.com



Malama develops and manufactures proprietary rigid foams made from bio-based, renewable resources.

Our Composites enable customers to produce stronger, lighter, less toxic, and far more sustainable products.

We can produce foams from a variety of plant-based polyols, enabling near-sourcing and local manufacturing strategies.





The Competition



A-Side:

Toluene-based TDI



B-Side:

Petroleum polyols



Traditional PUR foams are toxic and difficult to recycle.



Malama Technology



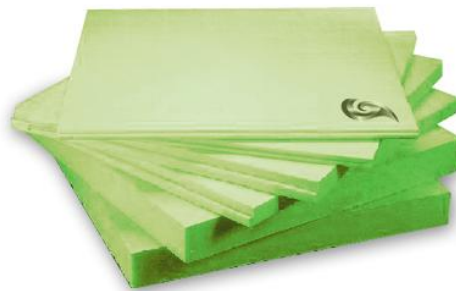
A-Side

Methylene-based MDI



B-Side

Polyols derived from soy, castor, jatropha or algae



Our products contain no toxic chemicals, have no negative human health impacts, and can be recovered or recycled.



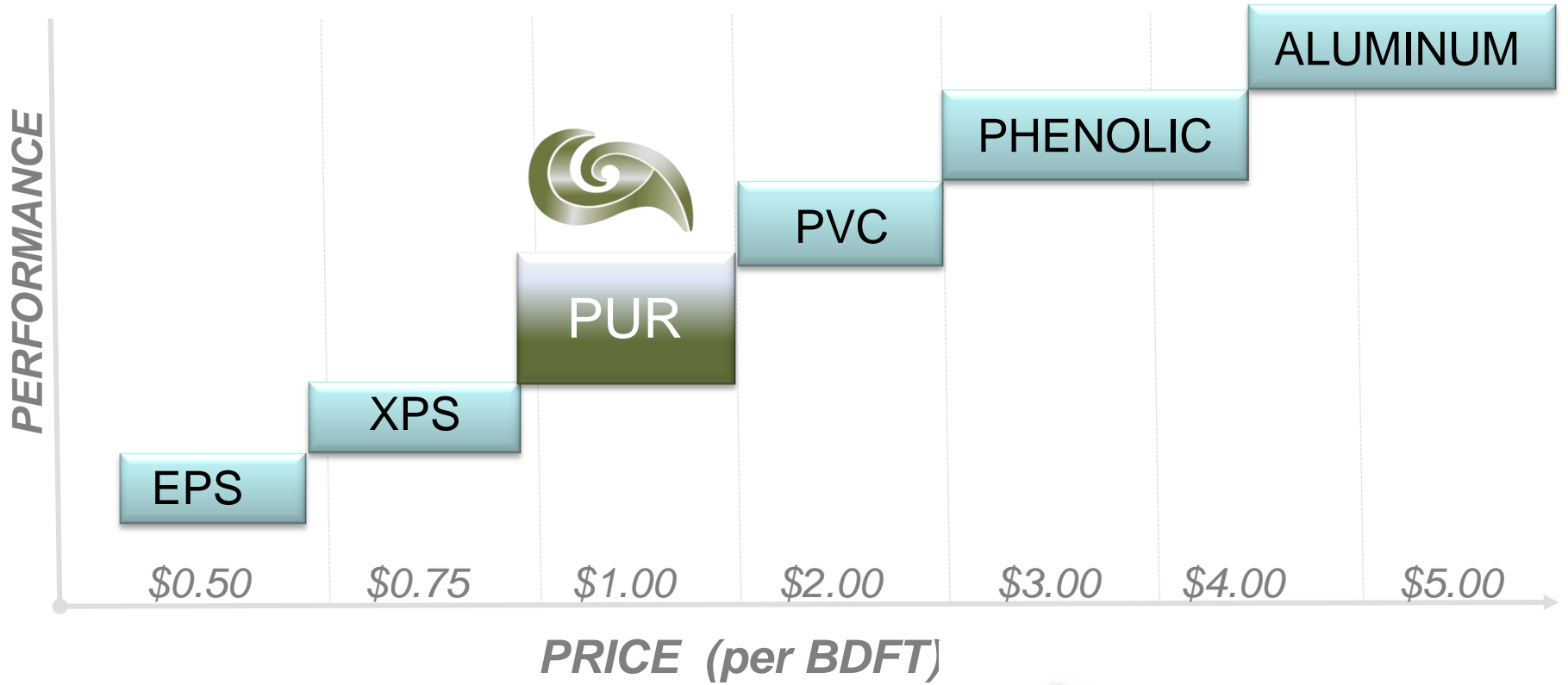
Sustainable Advantages

Our products are cost and performance competitive with petroleum-based PUR foams, but demonstrate significant human health and environmental benefits.

FEATURES	BENEFITS
High bending & shear strength	Yields resilient, durable products
High R value & moisture resistance	Ideal for insulating homes, cars, appliances
Uniform density and cell structure	Machines and surfaces accurately
Made from low-cost plant polyols	Price competitive with petro-based foams
Zero emissions (Berkley Analytical)	Safer work places and living environments
Fully recyclable; compostable	Superior lifecycle performance
Carbon negative (USDA-NIST Study)	Every pound sequesters 2.6 lbs of CO ₂ e



Competitive Landscape



- PRICE
- PERFORMANCE
- ZERO EMISSIONS
- RECYCLABLE





US PUR Market

\$9.5 BILLION



Construction
\$6.9 Billion



Appliances
\$1.4 Billion



Transportation
\$550 Million



Packaging
\$450 Million



Industrial Design
\$200 Million

Launch Strategy

We have developed a series of foams formulated specifically for industrial design applications. This strategy enables Malama to:

- 1) Establish our IP and eco-brands;
- 2) Secure customers and cash flow.



The entertainment industry utilizes \$5-10MM in foams to sculpt movie sets. (“Titanic” alone used 2 million pounds)

The studios purchase Trymer®, an insulation foam from ITW that contains pentane as the blowing agent. It emits VOC’s, is difficult to recycle and was never intended for human contact.





Studio BioFoam[®]

On June 1, 2012 Malama launched a foam formulated specifically for hand sculpting and machine shaping.

Studio BioFoam[®] is a zero emission material with water as the blowing agent. It has been tested by all major studios.

Additional markets for this product include trade show exhibits, museum displays, industrial design, fine arts and crafts.





AinaFlow® Pour Foam

In Q1 2013 Malama will launch a new MDI-based foam for the \$20MM surfboard & stand-up paddleboard industry.

The industry uses foam made from toluene diisocyanate, a B1 carcinogen that poses significant risk to the workers who pour the blanks and craftsmen who shape the finished boards.

Additional markets for *AinaFlow*® include industrial designers, store fixture companies, marine and aerospace industries.



Growth Strategy

A full-page background image showing a surfer in a crouched position riding a large, dark blue wave. The wave is breaking, creating white foam and spray. The sky is a clear, deep blue. The overall scene is dynamic and energetic.

In 2014 the Company will leverage its IP platform to enter the building products industry. We will do so by:

- 1) Developing formulas with higher R value and fire rating;
- 2) Commercializing under license with strategic customers.



AinaCore® Insulation

Malama is developing structural insulated panels and pour foams for the \$6.9 billion construction industry.

Powerful mandates favor higher performance, bio-based, green building products & construction methodologies.

Initially, the Company will focus on interior, non-structural applications, and is selling panels to a door manufacturer.





Powerful mandates drive adoption of AinaCore[®]



USGBC's LEED Certification Program

Energy & resource efficiency; Indoor air quality

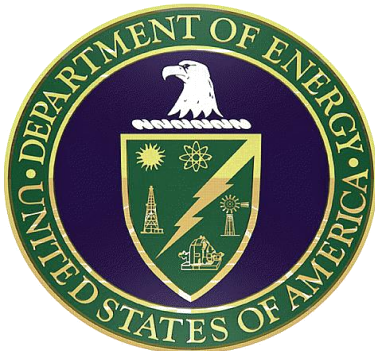
EPA's Environmentally Preferable Purchasing

Low environmental impact; Lifecycle analysis



USDA's Bio-Preferred Purchasing Program

High plant-based content; Domestic sourcing



DOE's Challenge Home Program

Energy efficiency; Indoor air quality; Durability



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