



**ALEXIUM**  
SPECIALTY CHEMICALS AND SOLUTIONS

Presentation to the Gabelli Conference  
Dirk L. Van Hyning, Deputy CEO  
March 22 2017



# Agenda

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# Alexium is a Specialty Chemicals developer

## Based in Greer, South Carolina, USA

### Who We Are

- **Specialty chemical solutions developer** and provider located in Greer, SC
- 42 full-time employees with **global** sales, manufacturing and supply chain footprint

### What We Do

- Capable of producing an extremely wide range of cost-effective chemical solutions at full commercial volumes using network of toll manufacturers
- We develop highly innovative and robust chemical solutions ready-to-use at our customers facility from day one
- IP portfolio of **25 global patent applications** covering our chemical structures and applications

### Rapidly Growing Business

- Rapid growth in sales from pre-revenue in 2014 to \$1.0AUD in 2015 to \$13.3M AUD in 2016
- \$2.0M AUD recurring revenue ***per month*** and growing

# The Alexium Strategy

Alexium team has over 150 years experience in chemical synthesis, manufacturing, product development and sales

Identify key markets in significant transition that are underserved by current market players and/or structure

Attack those markets through combination of novel technology and unparalleled integration support

Leverage low-capital manufacturing strategy and key relationship with major industry players to price competitively and impact target markets quickly

Current Focus In **Flame Retardancy** and **Thermal Regulation**



# Fire Retardant Market Key Drivers

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- \$7.0B annual global industry driven by combination of regulation and liability mitigation (~7.5% CAGR through 2019)
- Roughly 65% of incumbent technology under regulatory pressure

## Regulatory / Green Drivers

- Evidence of toxicity and bio accumulation in halogenated compounds (incumbent technology)
- Increased regulatory and legislative focus across US and Europe on restricting / eliminating the use of halogenated compounds
- Increased cases of litigation against products without appropriate or effective FR treatments is driving demand for better solutions



## Fire Retardant Market Key Drivers

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### Alexium Advantage

- Alexium's proprietary chemistries are eco-conscious and non-hazardous
- Alexium is able to meet and/or exceed market needs while hitting price points to win business and achieve margins of 30-60%
- No other chemical company has proven to meet durable FR needs while minimally impacting other properties



# Thermal Regulation Market Key Drivers

- \$1.5B annual global market for chemistry which absorbs heat and can be infinitely “recharged”
- Markets include: bedding, under/activewear, HVAC, energy storage
- PCM market is projected to register a CAGR of 20.8% between 2014 and 2019

## Market Drivers / Alexium Advantage

- Alexium has developed Alexicool, a combination thermal regulation, flame retardant and anti-odor package
- Skyrocketing demand in markets in need of development support
- Current offerings monolithic, expensive, alter material properties excessively
- Alexium has quickly established itself as best-in-class for customer service and value



# Key Alexium Fire Retardant Market Highlights

## 1. Flame Retardant Textile Markets

- Alexium is in scale-up or active selling of FR chemistry with numerous key players in three key commercial textile markets: Transportation, Decorative Fabrics and Outdoor Fabrics
- FR chemistry sales into these three markets is estimated to be > \$400M per year



## FR Textile Focus – Outdoor Market

- Alexium has developed the first durable, high-performance eco-friendly FR solution for tenting fabrics
- Alexium has partnered with industry giant ICL to work with end retailers to develop new industry standards for eco-conscious FR solutions
- Alexium negotiating supply agreements with multiple major players in consolidated tenting fabric field
- Alexium currently making investments to become a leader in certification testing of FR tent fabrics



# Key Alexium Fire Retardant Market Highlights

## 2. Military Flame Retardant Textile Markets

- Currently, only 10% of military personnel get FR protected uniforms due to high cost of incumbents
- FR Army Combat Uniform is >\$100M annual industry
- “Holy grail” is to treat standard 50/50 NyCo CU fabrics to meet FR standard

## Alexium Progress / Success

- Alexium successfully developed FR treatment for 50/50 NyCo in 2016 through funded effort with Natick
- Recently partnered with major current fabric supplier to Army and Marines to tailor combat uniform fabrics
- Working directly with Army and Marines alongside fabric partner to finalize fabric and enter uniform field trials



# Key Alexium Fire Retardant Market Highlights

## 3. Flame Retardant Cotton – Alexiflam NF

- FR cotton chemistry market exceeds \$250M per year
- FR cotton chemistry market dominated by two products, Pyrovatex CP and Proban for decades
- Difficult application process and high levels of formaldehyde in both incumbents



## Alexium Progress Success

- Alexium has developed a groundbreaking new FR cotton technology that:
  - Performs to the same level as the incumbents
  - Cost-competitive on raw materials
  - Much lower variable cost to convert
  - Zero reportable levels of formaldehyde
- Alexium is in negotiations to license this technology with three global chemical suppliers
- Licensing agreement anticipated in 2017



# Key Alexium Fire Retardant Market Highlights

## 4. Flame Retardant Epoxy Market

- FR chemistry for electronics currently exceeds \$1.3B per year
- Current market serviced by halogenated materials or ineffective materials
- Eco-conscious materials which work at low loadings are highly desired



## Alexium Progress / Success

- Alexium has successfully developed a chemistry and processing method to achieve the requirements of this market (circuit boards)
- Alexium has its chemistry in UL testing with major supplier into this market
- Working with industry leader ICL to launch this material/process globally to its extensive network of customers



# Key Alexium Thermal Regulation Market Highlights

## 1. Bedding

- Key driver for bedding industry is to combat “hot” feel of mattresses
- Thermal Regulation chemistry demand in this market exploding
- Current offering does not satisfy cost or performance requirements of large segment of market



## Alexium Progress / Success

- Alexium secured first Alexicool account with major bedding brand in October of 2016
- Presently, Alexicool is being applied to **ten** different bedding programs
- Current Alexicool shipments into the bedding industry exceed 20,000 lbs per week with margins exceeding our average target of 40%
- Recent disruptions in bedding supply chain will positively affect Alexium's position



# Key Alexium Thermal Regulation Market Highlights

## 2. Pillows & Bedding Auxiliaries

- Same market drivers as mattresses
- Alexium recently signed MOU with Pegasus Home Fashions to offer Alexium-treated pillows in major retailers
- Alexium actively working with other pillow suppliers in institutional and overseas markets
- Forecasted revenues beginning in mid-2017



## 3. Apparel

- Alexium working exclusively with worldwide leader in innerwear/outerwear to offer Alexicool globally on customers brand
- Currently integrating our cooling chemistry with wicking components
- Expect revenues in late 2017



# Toll Manufacturing/Supply Chain

Scale through asset-light operating model



VLS-GROUP



- Strategic partnerships established to rapidly scale go-to-market capabilities.
- Manpak is in Australia, Brocolor in Germany; VLS in Belgium, Euroflam in the UK with the other partners being located in the US.








# Global Sales Partnerships

**Alexium has established strategic partnerships in order to rapidly scale its go-to-market capabilities**

- Partnerships were carefully selected according to geography and sector expertise
- 48 sales agents representing various Alexium target markets started in 2016

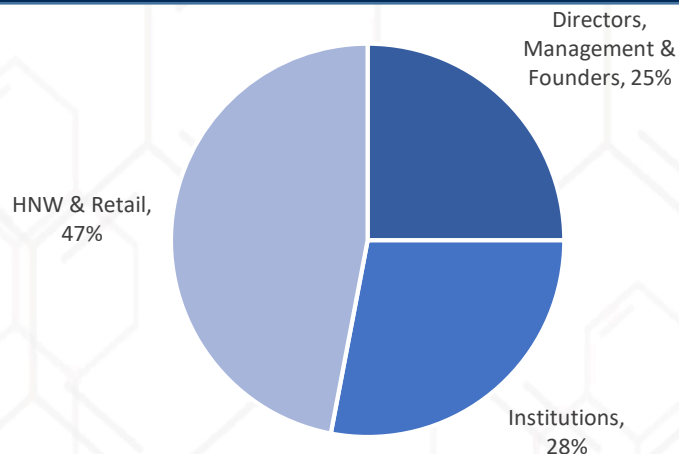
## Global Distribution & Sales Agent Network

 iTextiles	<ul style="list-style-type: none"> <li>• Europe, Asia</li> </ul>	Transport and military & workwear segments
 allure	<ul style="list-style-type: none"> <li>• Brazil</li> </ul>	Workwear, carpet, and transportation industries
 Creating Solutions CHEMPLAS	<ul style="list-style-type: none"> <li>• Australia &amp; New Zealand</li> </ul>	Transportation, workwear, carpet, upholstery
 JEBSEN & JESSEN INGREDIENTS	<ul style="list-style-type: none"> <li>• Southeast Asia: Myanmar, Vietnam, Indonesia, Thailand, Malaysia, Singapore</li> </ul>	Polymers & formulated compounds sales groups
 GADOT	<ul style="list-style-type: none"> <li>• Israel &amp; Mediterranean</li> </ul>	Textiles (workwear, military, bedding, transportation) , polymers, plastics
Schmits Chemical Solutions	<ul style="list-style-type: none"> <li>• Northern &amp; Southern Europe</li> </ul>	Workwear, transportation, bedding, and military
Southern Solutions LLC	<ul style="list-style-type: none"> <li>• South eastern US</li> </ul>	Polymers and textiles



# Financial Overview

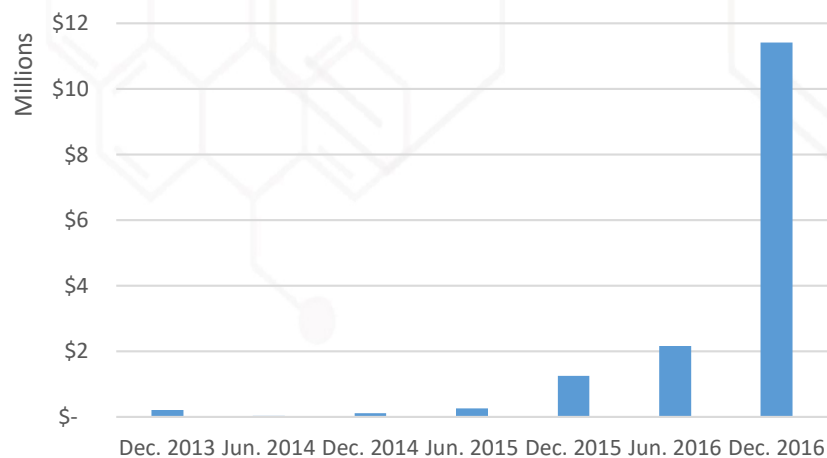
## Shareholder Structure



## Key Statistics

ASX Code	AJX
Current Share Price	\$0.55
52 Week High	\$0.91
52 Week Low	\$0.47
Shares on Issue	~303m
Market Capitalisation	~\$167m
Cash (31 December 2016)	~\$11.4m
Cash Burn per month	~\$550k

## Revenue Growth



\*Key Statistics as of 16 March 2017.



# Board of Directors



## Gavin Rezos – Executive Chairman

- Extensive international investment banking experience
- Held CEO positions in companies in Australia, the UK, US & Singapore
- Non Executive Director of Iluka Resources



## Nick Clark – CEO and Executive Director

- Degree in Economics and Law with a postgraduate MBA and PhD in Management
- Certified with the AICPA as a Chartered Global Management Account
- Attended the Yale CEO College over two years



## Congresswoman Karen Thurman, (D-FL) – Non-Executive Director

- Congresswoman Karen Thurman served in the United States House of Representatives from 1993 to 2003.
- Prior to being elected to Congress in 1992, Thurman served in the Florida State Senate for 10 years.
- She obtained her bachelor's degree in Education from the University of Florida.



## Craig Metz – Non Executive Director

- Partner at Nelson, Mullins, Riley and Scarborough LLP with over 20 years experience in legislative and regulatory affairs
- Served as Chief of Staff to the late Congressman Floyd Spence (R-SC)
- Held staff positions in the United States Senate and House of Representatives
- Appointed to senior positions in the Executive Branch of the Federal Government



## Brigadier General Stephen Cheney – Non-Executive Director

- Former Inspector General of the Marine Corps and Commanding General of Parris Island Marine Base
- Former Deputy Executive Secretary to U.S. Defense Secretary Dick Cheney under President George H.W. Bush
- Sits on Secretary of State John Kerry's Foreign Affairs Policy Board



# Alexium – Positioned for Success

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Alexium Product Launches	✓
Clear Market Demand	✓
Commercial Partnerships	✓
Clearly Differentiated Technology	✓
Scalable Capital Light Business Model	✓
Novel Environmentally Friendly Chemistry	✓
Expanding Patent Portfolio	✓





# ALEXIUM

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