



ALEXIUM

Reactive Surface Treatment Technology

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Alexium International Group Limited®

Company Overview

- International company based in Perth, Western Australia and Greer, South Carolina
- Listed on the ASX (ASX: AJX) and Frankfurt stock exchange (E7T.F)
- Holds exclusive global commercial rights to **Reactive Surface Treatment** (“RST”), an award winning technology developed in US government labs.
- Alexium established to exploit commercial opportunities for the RST technology globally supported by a strategic commercial and technology relationship with the US Department of Defence



Board & Management



Gavin Rezos – Executive Director and Chairman

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



Steve Ribich – Chief Executive Officer

- 15 years experience developing new technologies from US military labs
- 10 years experience in the resources industry in processing and CEO roles



Stefan Susta – Executive Director

- Over 10 years experience working with US Department of Defence on technology insertion, technology transfer and commercialisation



Craig Smith Gander – Non Executive Director

- Graduate Royal Military College Duntroon, ten years military service
- Owner of Kwik Transport and Crane Hire



Nick Clark – Chief Financial Officer / Company Secretary

- 15 years management experience in the commercial, minerals and petroleum sector
- Commercial specialist in risk mitigation, contract and tender management, strategic management



John Almond – Business Development Director & Manager Europe

- Previous investment management and advisory roles in finance sector
- Experience in identifying and funding emerging companies and technologies

What are Silanes?

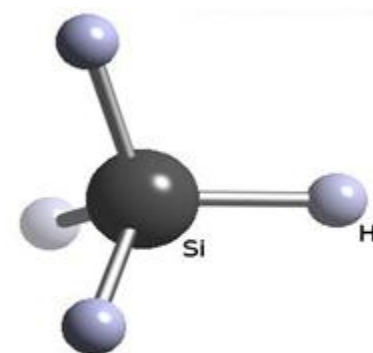
Silanes are silicon chemicals combining both organic and inorganic reactivity in the same molecule.

Used for over 50 years as “coupling agents” to add strength and durability.

Original use in fibreglass composites to increase and maintain strength.

Today critical for production of inks, paints, plastics, rubber, pharmaceuticals, textiles, tyres, adhesives, protective coatings, etc.

Multi-billion dollar industry (Dow Corning, Wacker, Evonik Degussa, Bluestar, etc) each offer huge catalogue of thousands of silane compounds for different functions.



Reactive Surface Treatment (RST)



Technology uses commercially available silane chemical compounds and functions



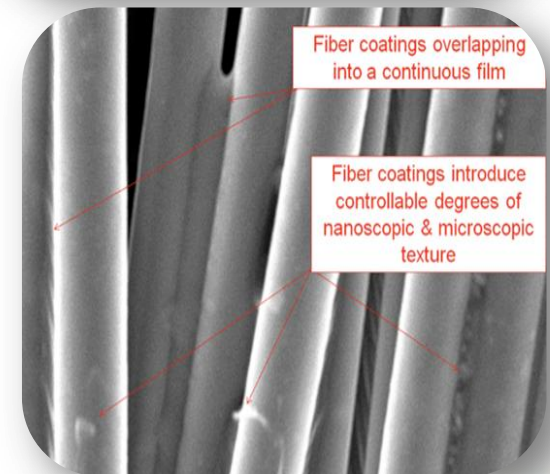
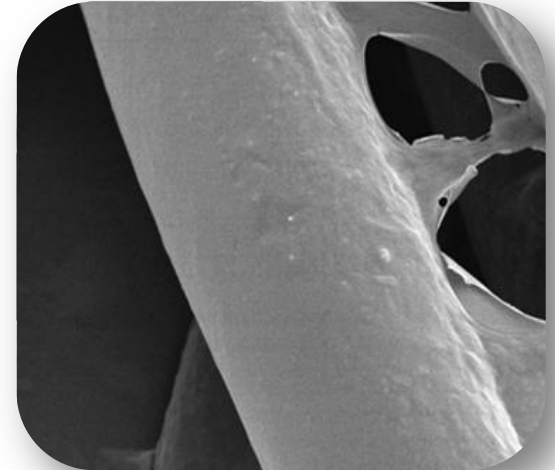
Unique microwave energy technology binds silicon compounds to surfaces



Faster and more effective coupling
Significantly lower energy use
Multiple functions applied via a single process
The treatment of much wider range of materials

Alexium “Worlds Best Technology 2009”*

- A potentially “disruptive” technology for dozens of industries
- Invented, tested and validated by US Department of Defense (“DoD”) over several years
- Investment to date by US Government > \$30 Million to prepare technology for own requirements
- Unique commercial and technology relationship exists between Alexium & DoD to ensure technology available for both defence and non-defence applications



- Selected from 90 international finalists by a panel of Fortune 500 technology scouts and venture capital investment firms at the WBT Showcase

RST Technology

Features

- Give ordinary textiles extraordinary performance
- Machine washable
- Self extinguishing in a fire
- Super hydrophobic and oleophobic
- Antimicrobial to protect against germs
- Chemical protection including acid
- Everything is completed in a single process in seconds

Properties / Capabilities

- Ability to attach multiple functions simultaneously
- Suitable for treatment of wide range of materials including glass, rubber, leather, metal oxides, wood and plastic
- Process results in a strong ‘triple point’ durable covalent bonding
- Functions exhibiting different properties and performance characteristics compared with attachment with other methods

Environmental Advantages

- Minimal energy consumption (not heat)
- Efficient use of water and chemicals
- Environmentally friendly process
 - Seconds of low energy microwave
 - Process uses no biodegradable solvents
 - Minimal non-hazardous by-products

Advantages vs. Conventional Tech.

- Process is very fast (seconds)
- Treatment may be either a batch or continuous process
- Highly and easily scalable
- Suitable for treatment of delicate materials
- Low capital costs and small footprint

Some RST Applications

Industry	Application	Driver	Tested	Comments
Textiles	Defence	Performance	Yes	CBRN suits, tents, masks, filters, boots
	Industrial Filters	Performance / Cost	Yes	Oil and water filters, filter membranes
	Furnishings / Upholstery	Performance / Cost	Yes	Fire retardant treatment, stain and water repellence
	Footwear	Performance	Yes	Oil and water repellence
	Specialist Apparel	Performance	Yes	Work wear, 'first responders'
Paints	Self-decontaminating	Performance	Yes	Military and industrial applications
	Regenerating Antimicrobial	Performance	Yes	Hospital and hygiene, longitudinal study
	Marine Antifouling/ballast	Performance / Cost	No	RST to address regulatory issues faced by the shipping industry
	Anti Graffiti	Performance	No	Low surface energy coating from RST
Packaging	Cellulose Packaging	Performance / Cost	No	Grafting of anti-counterfeit 'watermarking' applied to packaging
Glass	Self Cleaning	Performance / Cost	Yes	single and multiple functionality to glass

Business Model

- Exploit high “value-added” opportunities
- License /JV agreements with industry leaders for each application
- Develop strategic relationships with key chemical partners
- “Specify” RTS technology for major defence programs
- Initial focus on CBRN protection for DoD (\$ billion opportunity)
- Broader collaboration with major textile providers to US defence industry
- Diversify into broader commercial applications

Commercial Focus - Military Textiles

Approx. 1,500,000 US military personnel (excl National Guard)

Alexium Technology funded mainly by NATICK and DTRA.

Focus to date on next generation CBRN suits (\$ billion opportunity)

- RST has met technical requirements
- Now undergoing field trials
- RST “out of the lab” and ready for commercial scale production

RST Technology short-listed for next generation firefighter suit

Alexium working with defence textile producers to produce more effective ‘multi-functional’ uniforms

Initial orders from DoD for treated textiles

Annual budget for US military textiles approx \$2.4 billion



Commercial Focus - Commercial Textiles

- Treatment of furnishings and upholstery for flame retardant and stain repellants
- Specialist work wear and first responder uniforms including aramids to provide new valuable functions
- Licensing requests from prospective textile partners
- Commercial terms agreed with leading US textile manufacturer SSM Industries Inc to make technology available for use in NASCAR's personal protection apparel and other similar applications



Commercial Focus - Military Paints

- Chemical Agent Resistant Coatings (CARC)
- RST used to modify surface performance of paint to repel chemical threats
- US Government funded field trials underway on planes
- Program involves US Air Force, Army and Navy and is being led by Alexium technology inventor
- Alexium holds exclusive commercial rights globally should RST technology be adopted



Commercial Focus - Filters

- New or improved functions bonded to filters
- RST can treat throughout the depth of filter
- Multi-billion dollar industry opportunity
- Initial trials demonstrated significant improved performance



Commercial Focus - Industrial Coatings

- Modification of paint fillers and nano particles to produce new unique properties
- Successful long-term trials on regenerative antimicrobial coatings using RST
- Similar requirements identified for
 - Antimicrobial paints and glass
 - Marine-anti-fouling coatings
 - Anticorrosion coatings

Intellectual Property and Agreements Summary

- US patent held by DoD
- Alexium holds exclusive license for the US market (including military)
- Alexium has filed patents in key territories globally (excluding USA)
- Initial UK & Hong Kong patents already granted to Alexium
- Agreement between Alexium and US Air Force secured Alexium future technology development opportunities
- Nominal royalties on sales in the USA paid by Alexium to DoD



New South Carolina Facility

- Announced by South Carolina, Secretary of Commerce
- 5 to 10 year tax ‘holiday’
- State and local property tax, corporate income tax, sales tax and job tax rebates together with training incentives provided by South Carolina and Greenville County
- Manufacturing and R&D facility completed in June 2010
- Close to leading materials, chemicals industry companies, academic establishments and Fortune 500 companies
- Facility will support both US DoD and commercial partner requirements for treating materials including paints for additional development testing



Gaining Momentum

March 2010

Low rate initial production test by USAF

April 2010

Alexium short listed for next generation firefighter ensemble

May 2010

New Greer, South Carolina facility

June 2010

Commissioning of first RST textile unit

July 2010

First sales and revenues from DoD

November 2010

Agreed commercial terms with leading US textile manufacturer SSM Industries

Potential Future Revenues

US Department of Defence

- Initial purchase orders for testing materials on new applications
- Selection as finalist for new firefighter fabric for US Air Force
- Field trials now underway using RST textiles for replacement lightweight JSLIST chemical and biological protective suit

Commercial

- Terms agreed for initial commercial licensing agreement
- Discussions on going with major partners in the textile and paint industries
- First revenue in 2010 from purchase orders, followed by commercial licensing
- Conservative estimates show very significant revenue rising from 2011

Investment Summary

- Award winning technology which is “disruptive” to many industries
- Alexium holds exclusive global commercial rights
- Initial patents granted in key markets
- Technology invented, tested and validated by the US government
- Alexium and DoD to develop new applications together
- Initial customer is Alexium’s commercial and technical partner
- Good sales forecast
- Technology gives performance and economic benefits and is environmentally friendly
- Experienced and performance-driven management team

Investment Summary

<i>(millions of securities)</i>	Undiluted	Fully Diluted
Ordinary Shares	107.9	107.9
Performance Shares*	-	52.5
Options@ 10 cents	-	7.0
Options@ 30 cents	-	16.0
Options@ 40 cents	-	2.5
Options@ 50 cents	-	2.5
TOTAL	107.9	188.4

Contact Details



USA

Operating Headquarters: Alexium Inc.
8 Distribution Ct, Greer, SC 29650 USA
P: +1 864 416 1060
F: +1 864 551 4555



EU

P: +44 (0)781 510 0859



Australia

Corporate Headquarters: Alexium International Group Limited
Lvl 28, AMP Tower, 140 St Georges Terrace, Perth, WA 6000 Australia
Postal: PO Box 512, Cottesloe, WA 6911, Australia
P: +61 8 9486 8852
F: +61 8 9486 8854