

REACTIVE SURFACE TREATMENT TECHNOLOGY

FREQUENTLY ASKED QUESTIONS

Where did the Reactive Surface Treatment Technology originate?

The technology originated from research conducted by Jeff Owens and his team at the US Airforce Research Labs (Materials & Manufacturing Directorate) as part of a program for enhanced personal protection against chemical and biological threats (CBRN).

How did Alexium acquire this award winning technology?

Alexium acquired the RST technology from the US Air Force Labs at a time when it had only been proven to laboratory bench top level and before further investment by Alexium, which led to the award of the World's Best Technology award in 2009. The US Department of Defence (DoD) does not commercialize technologies, but encourages commercial sector companies to take the financial risk of taking bench top technologies to scaled up production capability under government legislated tech transfer programs, so that if the DoD seeks to incorporate the technology into its operations, it will be able to do so through a commercial supplier.

How does it work?

The patented technology uses microwave energy in combination with silane chemistry to attach either individual or multiple functional groups to a wide range of surfaces or substrates.

Is it environmentally friendly?

The process uses commercially available chemicals and only minimal energy and no harmful solvents.

Will it cost less to use than conventional technologies?

As the technology can be applied to the widest range of surfaces and substrates, it is therefore very competitive with a range of conventional technologies. Alexium has identified several applications where it believes the process offers superior cost, performance and environmental benefits over existing technologies. Furthermore, in the case of textiles, by giving new properties to conventional fabrics, their value and scope of use may be significantly increased, often replacing more expensive materials.

What are performance advantages over conventional technologies?

The process produces extremely stable and durable single or multi-functional coatings. There are also a number of performance advantages, including the ability to either treat materials or attach functions which are not currently able to be accommodated with conventional treatments. The fact that the process enables multiple functions to be attached simultaneously via a single treatment often means that it may replace multiple expensive, energy and chemically intensive treatments.

What are the competitive technologies?

The landscape for technologies for surface treatments is constantly changing and new laminating techniques, UV and plasma deposition treatments are currently being commercialised. However, the market appetite for surface treatments is enormous for many industries including textiles, leather, paints and glass coatings, plastics packaging and printing. Our strategy has been to identify those applications where the technical, practical and economic advantages lie with the Alexium process.

What do you mean by Multi Function?

There are many technologies which enable a single function, such as water and oil repellence or flame retardants, to be attached to a surface. The Alexium RST technology allows multiple properties to be added simultaneously. We have demonstrated this by treating a standard military cotton/nylon fabric so that it is machine washable, oil and water repellent, flame retardant, antimicrobial to protect against infection and also to provide protection against various chemical or biological threats via a single process treatment, which is completed in seconds.

How much better is performance than current US or European standards?

Our work involves treatment of a broad array of materials for the widest range of applications, specifications and standards. The original focus of our technology was individual protection for the defence industry, which obviously has some of the highest standards in terms of performance and durability. Our current focus is to work with partners to optimise the technology to meet their particular requirements and performance standards.

How much has been spent to date developing the technology?

More than US\$30m has been spent so far. The technology is at the centre of a number of US development programs and continues to attract funding from various government agencies. A significant portion of the cost of the technology development has been from DTRA (The Defence Threat Reductions Agency) www.dtra.com and NATICK - The US Army Soldier System (<http://www.army.mil/info/organization/natick/>).

How does Department of Defence (DoD) tech transfer work?

The Air Force has engaged Alexium as the partner to commercialise the technology developed by Dr. Jeff Owens. Alexium has obtained rights to the U.S. IP rights via an exclusive license through a patent license agreement with the Air Force. Alexium and the U.S. Air Force are also working together under a Cooperative Research & Development Agreement to assist the DoD in transitioning the technology to commercial and defence customers by sharing resources and expanding the IP portfolio.

FREQUENTLY ASKED QUESTIONS

Who are Alexium's business partners?

Alexium is actively engaged with a number of business and university partners. Alexium has and continues to work with Clemson University, N.C. State University, and a number of US Government Laboratories. Alexium is currently conducting production runs at SSM Industries in Tennessee and developing products for a list of other companies.

What operations are conducted at your Greer, South Carolina facility?

Alexium is using the South Carolina facility as its operational headquarters. Operations here include the staff offices, a development laboratory, and infrastructure for test and evaluation, treatment module assembly, and limited production to support tenders and commercial partner testing requirements.

Who manages the European business?

The European business is being led by Mr. John Almond with support from the US operations.

Where is the research and development undertaken?

A significant portion of the cost of the basic R&D on the Alexium technology is undertaken and funded by the US Department of Defence. Under a Co-Operative Research & Development Agreement (CRADA) between Alexium and the USAF, both parties have agreed to identify new applications and accelerate the availability of the technology not only for defence but also for broader non-defence related applications.

Why aren't you spending research funds in Australia, given you are ASX listed?

As most of the cost of the R&D is funded by the US DoD, it makes sense for our laboratories and research to be located in the US. Our market however is international and there are significant potential applications for the Australian market – which is one reason we have listed on the ASX. Our shareholders will gain added value from our international focus.

Which applications are you focused on now and what are the next ones being addressed?

As the Alexium technology was invented, tested and validated by DoD scientists, for their own specific needs, Alexium is uniquely placed to address the multi-billion dollar opportunities presented by military textiles. In addition, Alexium is working with a growing list of technical textile producers in applying the technology to enhance the performance of a wide range of technical textiles in the areas of ballistic, fire, oil and water protection, as well as dyeing and printing. Other priorities include the treatment of glass, polycarbonates and paints to enhance and expand their properties and functionality.

Will you list in the United States?

Alexium is dual listed on the Australian Securities Exchange (ASX:AJX) and the Frankfurt Stock Exchange (AX:AJX). However, our operations and the majority of our staff are based in the US and we plan to list on a US stock Exchange within the next 3 years. Initially this may be via American Depositary Receipts (ADR's) on NASDAQ or an international listing on the OTCQX Exchange, but thereafter it is expected that Alexium's place of incorporation and head office will move to the US. Alexium will still maintain a listing on the Australian and Frankfurt Exchanges.

Why the multiple listings?

The RST technology has the potential for extremely broad applications and the European, Australian and American markets offer varying opportunities. By being listing in and catering for these different markets, we can potentially add greater value for our shareholders.

DISCLAIMER

This document is not for distribution in the US and alone or with collateral documents does not constitute an offer or an invitation to participate in the issue of securities of Alexium. Any statements, opinions, projections, forecasts or other material contained in this document do not constitute any commitments, representations or warranties by Alexium or its associated entities, directors, agents and employees.

Except as required by law and only to the extent so required, directors, agents and employees of Alexium shall in no way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatsoever nature arising in any way out of, or in connection with, the information contained in this document. Further, should any of the information contained herein change, Alexium does not have any obligation to inform recipients of this document. This document includes certain statements, opinions, projections, forecasts and other material, which reflect various assumptions. The assumptions may or may not prove to be correct. In particular, there is a risk that the timing, scale and delivery of some of the outcomes referred to in this document will not eventuate.

The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the United States Air Force ("USAF").

All figures in US dollars unless otherwise stated. Information provided as at 30 August 2010.



Nicholas Clark
CFO and Company Secretary

Alexium International Group Limited
Level 28 AMP Tower
140 St Georges Terrace
Perth WA 6000 Australia

Phone: +61 (8) 9486 8852
Fax: +61 (8) 9486 8854
Email: nclark@alexiuminternational.com.au
Website: www.alexiuminternational.com