

**QUARTERLY ACTIVITIES REPORT FOR  
THE PERIOD ENDED  
30 SEPTEMBER 2016**



**ALEXIUM**  
SPECIALTY CHEMICALS AND SOLUTIONS



Attached is the quarterly activities report for the period ended 30 September 2016 for Alexium (“Alexium,” “the Company”). The following information has been prepared to provide investors and other stakeholders with a better understanding of activities for the period ended September 30, 2016.

Alexium’s revenue growth towards revenue guidance continues in a robust fashion, with cash receipts this period of A\$3.8m, an increase of 440% over last reporting period with a significant further increase in receipts forecasted for the remainder of the calendar year as expected as Alexium’s product rolls out.

As at the end of October 2016, Alexium is currently tracking at A\$15m for CY2016 with licencing revenue and additional contract revenues to year end, yet to be included as part of the earlier US\$18.5m CY2016 projection. The source of cash receipts on a sector by sector basis may vary at CY2016 year end as both new revenues have been received in new markets and some planned contract revenues for other markets are now set to arrive in early 2017 following longer than expected customer end product certification processes. Importantly, the quantum of potential revenue in each case where delay has occurred has significantly increased as the relevant customers have increased the product range under the respective contracts which had led to certification timing changes and hence delay on actual revenue cash receipts. In addition, licensing revenues involving significant upfront payments may be booked in CY2016 in the event such Licences are signed and cash received before December 31.





## BUSINESS OVERVIEW

### Regulatory Trends

The regulatory environment continues to shift in favor of eco-conscious flame retardant (FR) products. The United States Environmental Protection Agency (EPA) recently announced the first five chemicals for immediate review and action under the recently signed update to the Toxic Substances Control Act. Included are two commonly used, dangerous flame retardants (Deca and Tris). Alexium's environmentally friendly and performance enhancing FR (Alexiflam™) is well positioned for growth after the EPA acts to remove these dangerous chemicals from the marketplace. Alexium continues to work with the US Consumer Product Safety Commission (CPSC) to promote the safe use of FR in all consumer products such as apparel, upholstery, furnishings and bedding. The CPSC is expected to issue regulations outlawing the use of certain kinds of FR in the marketplace and Alexiflam™ is poised to capture a significant share of the consumer market.

### Rapid Success in New Market Space- Alexicool™,

Since the introduction of its phase change material(PCM) chemistry, Alexicool™, last quarter, Alexium has gained rapid traction across a wide range of markets. The Company won its first PCM account this period for its Alexicool™ line, being chosen as the PCM and FR provider to be applied and sold on one of the largest mattress brands in the world. In addition, during the last period, fabric providers to the mattress industry have selected the Alexicool product™ and those suppliers have been actively marketing their fabric with Alexium chemistry of multiple major mattress brands.

Outside of the bedding space, Alexium has initiated scale-up efforts with global suppliers of innerwear/outerwear, pillows being sold to consumers through major retailers, all targeting the addition of Alexicool™'s cooling feature to their products in the near future. With a forecasted compounded annual growth rate in the global PCM sector of over 25% and short sales cycle times (~3 months), the Alexicool™ product line has become and will continue to be an additional major product line for Alexium.



## BUSINESS OVERVIEW (CONT.)

### Recurring Revenue

Due to the strength of Alexium's products and a robust opportunity pipeline, the Company increased both its cash position and ongoing, recurring revenue during the reporting period. At the end of the period, the Company had accounts representing \$1M of revenue per month, which does not include Alexium's recently won accounts in bedding, which will increase that number to over \$1.25M per month, bringing Alexium to the verge of cash neutrality.

### Sustained Increase in Sales Pipeline

A key leading indicator of Alexium's growth potential is the opportunities in the sales "pipeline". During the reporting period, Alexium maintained its strong retention of customers in the pipeline at over 90%. In addition, just during the last 3 months, the Company increased the pipeline opportunities in our core FR businesses by 58%. This significant increase in pipeline opportunities during the period is a result of success in key elements of Alexium's strategy:

- Leveraging its expanding commission sales network;
- Rapid traction from the Alexicool™ product line;
- The ability to customize formulations for customers including the ability to provide multi-function capability within single formulations giving rise to significant customer savings in their production processes;
- Development of new opportunities for FR solutions in the electronics sector; and
- Increased brand recognition in the marketplace.





## MARKET OVERVIEW AND HIGHLIGHTS

### Bedding and Decorative Fabrics/Contract

Alexium continued to increase its presence in the bedding and decorative fabric market space this period. Our offering of Alexiflam™, Alexicool™ and all-in-one solutions has expanded from mattress fabrics into pillows and upholstery backing. Key achievements during the period:

- Alexium was selected by two producers of mattress ticking fabric to provide an all-in-one FR/cooling/anti-odor package to go into mattresses for one of the world's largest mattress brands;
- Alexium increased product offerings by developing higher performing and lower formaldehyde options for our customer base in both the FR Products & PCM Cooling Technology space;
- Alexium realized a 150% increase of customers who are in negotiations with their customers for 2017 implementation which is taking place at the October High Point Show and January Las Vegas Show; and
- Alexium developed a cooling solution for a key player in pillow manufacturing for department stores and retailers and are in exclusivity negotiations.

### Automotive / Transportation

In the automotive and transportation sectors, Alexium's chemistries are used on fabrics, upholstery and other components in automotive, aerospace and public transportation. Alexium has successfully produced and scaled-up chemical solutions for the transportation sector that meets new, strict environmental regulations including VOC and fogging requirements currently being implemented for model year 2018, making our chemistries superior to those now available. A selection of highlights:

- Alexium customers in Europe and elsewhere have issued purchase orders for final stage plant trials to add Alexiflam™ chemistry to automotive body cloth fabric for upcoming model years; and
- Alexium has strategically selected this market for increased brand recognition.



## Coatings and Polymers

Alexium's FR solutions have a wide range of applications in the electronics market and building construction sector including coatings, polymers, molded plastics, industrial fibers and cabling. The Company has developed and is manufacturing a proprietary non-halogen reactive FR to the market that is environmentally friendly and can replace current products. Some highlights include:

- The Company saw a 150% increase in sampled customers with laboratory projects since the end of the previous period;
- Alexium has entered in final UL certification with one of the largest circuit board manufacturers in the world and are a final candidate with one of the largest Epoxy manufacturers in the USA; and
- Alexium has entered products in the crucial electronics sector UL Certification Process for global approval codes to allow us to fast track additional customers for transition.

## Outdoor

Alexium's FR chemical solutions are produced for use by the military for application to uniforms, gloves, backpacks, and tactical gear. The Company continues to make significant progress in executing its strategy to replace incumbents of several major US Government programs such as Flame Resistant Army Combat Uniform (FR ACU) for which field trials involving US Army personnel on FR versions of various Nylon Cotton (NyCo) uniforms are ongoing. Alexium is attacking the breadth of the market from multiple angles including major prime suppliers and Tier 2 suppliers; the Company is also participating in all submissions with multiple vendors and working with government agencies to promote Alexium's new green technology. Key achievements:

- Alexium has scheduled a bulk customer trial in Asia for December with 2 weeks dedicated to ensure the successful plant implementation of the AlexiFlam™ Technology; and
- Alexium has initiated parallel programs with adjacent tenting fabric suppliers as 97% of outdoor fabrics for this application are made in this region of the world and an equal amount of current non environmentally friendly FR chemistry is targeted for replacement for 2017



## Military

Alexium's FR chemical solutions are produced for use by the military for application to uniforms, gloves, backpacks, and tactical gear. The Company continues to make significant progress in executing its strategy to replace incumbents of several major US Government programs such as Flame Resistant Army Combat Uniform (FR ACU) for which field trials involving US Army personnel on FR versions of various Nylon Cotton (NyCo) uniforms are ongoing. Alexium is attacking the breadth of the market from multiple angles including major prime suppliers and Tier 2 suppliers; the Company is also participating in all submissions with multiple vendors and working with government agencies to promote Alexium's new green technology. Key achievements:

- Alexium conducted top level meetings with the United States Marine Corps (Marine Corps Systems Command) to discuss the company's innovative FR treatment for uniforms. Since those discussions began, Alexium has provided FR treated fabrics (to specifications) to the Marine Corps for testing and review. The Marine Corps is seeking to enhance the FR capabilities of its uniforms in the next year and Alexium was very well received both on capability and price; and
- Alexium continued to establish critical supply chain partnerships including entering exclusivity negotiations with the current holders of a major US military program

## Licensing and Exclusivity Overview

This reporting period showed a marked increase in customer interest and requests for licensing and exclusivity arrangements for Alexium products reflecting growing awareness of Alexium's capability to meet new FR environmental requirements and Alexium's PCM cooling technology. As the marketplace demand for both eco-friendly FR solutions and cooling properties continue to increase, customers who identify high performance products in these spaces have shown a clear drive to "capture" Alexium's products in their particular market segment through such agreements. At the close of the period, Alexium is evaluating and/or negotiating seven separate licensing and exclusivity agreements in the FR cotton, epoxy and cooling market spaces.

Each of the agreements under consideration by Alexium has differing terms and represent not only significant revenue potential but market validation of the strength of Alexium's products. Licenses may include upfront payments which may be received in the December quarter with ongoing royalties and minimum sales payments over the respective terms of such licenses.



## New Alexium Facility

Alexium originally operated out of a single facility in Greer which ultimately provided around 5,000 sq. ft. of laboratory and office space and in 2014 moved the sales and finance staff into a separate office space several miles away. During the period, Alexium consolidated all staff into its new 25,000 sq. ft. facility at 350 W. Phillips Road in Greer, South Carolina and had an official ribbon-cutting ceremony with United States Congressman Trey Gowdy of South Carolina. The primary purpose of the facility is three-fold: to have a working space tailored to the specific technical needs of Alexium including state of the art laboratory equipment; to facilitate effective communication and dialogue among interdependent departments, and to allow for expected future growth.

The facility was designed with all three goals in mind and staff are currently operating out of the new facility.

## Extending Alexium's Global Reach

Alexium's continues the globalization of its products through a number of activities which include expanding our commission sales force, increasing our global manufacturing and support structure and increasing overseas scale-up activity. Alexium now has 48 sales representatives across the globe and expanding toll manufacturing facilities in key countries. Alexium's achievements outside the US base during the period are summarized below:

Australia	Europe	Asia-Pacific	South America
<ul style="list-style-type: none"><li>Australian manufacturing partners fully established to support anticipated 4Q business</li></ul>	<ul style="list-style-type: none"><li>5 production trials scheduled in November in Pakistan</li><li>Production currently being established in Malaysia to support tent fabric business in China starting early 2017</li></ul>	<ul style="list-style-type: none"><li>Established toll manufacturing partners in Netherlands and Germany to support EU business</li></ul>	<ul style="list-style-type: none"><li>Process initiated to establish manufacturing in Brazil due to strength of South American opportunity pipeline</li></ul>

U.S. Contacts	U.S. Corporate Offices:		U.S. R&D Center
Nicholas (Nick) Clark Chief Executive Officer Nclark@alexiuminternational	350 W Phillips Road Greer, SC 29650	1100 New York Avenue NW Suite 710W Washington DC, 20005	350 W Phillips Road Greer, SC 29650 U.S.: 864.416.1060 ABN: 91 064 820 408 ASX: AJX



## About Alexium

Alexium International Group Limited (ASX: AJX, AX:AJX, OTC QX: AXXIY) holds proprietary patent applications for novel technologies developed to provide flame retardancy for a wide range of materials. These environmentally friendly flame retardants have applications for a number of industries and can be customized. Further, Alexium has developed products for a range of other applications including phase-change materials, water repellents, antimicrobials, and combinations thereof. Alexium also holds patents for a process developed initially by the U.S. Department of Defense, which allows for the surface modification and attachment of nano-particles or multiple chemical functional groups to surfaces or substrates to provide functions such as fire retardancy, water proofing, oil proofing, and anti-microbial treatments. Applications under development include but are not limited to textiles, packaging, electronics, and building materials. Alexium's chemical treatments are currently marketed under the Alexiflam™, Alexiflam FR™, Alexiflam SYN™, Alexiflam NF™, Alexicool™, Alexiflam PB™, Alexiflam AD™ and Alexicool™ brand names. For additional information about Alexium, please visit [www.alexiuminternational.com](http://www.alexiuminternational.com).

## Forward Looking Statement

This release contains forward-looking statements that are based on current expectations, estimates and projections about Alexium's business, management's beliefs and assumptions made by management. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. Except where required by applicable law, the Company expressly disclaims a duty to provide updates to forward-looking statements after the date of this release to reflect subsequent events, changed circumstances, changes in expectations, or the estimates and assumptions associated with them.

## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of entity**

ALEXIUM INTERNATIONAL GROUP LIMITED

**ABN**

91 064 820 408

**Quarter ended ("current quarter")**

30 September 2016

<b>Consolidated statement of cash flows</b>	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	3,807	3,807
1.2 Payments for		
(a) research and development	(622)	(622)
(b) product manufacturing and operating costs	(2,568)	(2,568)
(c) advertising and marketing	(124)	(124)
(d) leased assets	(40)	(40)
(e) staff costs	(1,379)	(1,379)
(f) administration and corporate costs	(793)	(793)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	6	6
1.5 Interest and other costs of finance paid	(3)	(3)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (GST received)	47	47
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,669)</b>	<b>(1,669)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(845)	(845)
(b) businesses (see item 10)	-	-
(c) investments	-	-

<b>Consolidated statement of cash flows</b>	Current quarter \$A'000	Year to date (3 months) \$A'000
(d) intellectual property	-	-
(e) other non-current assets	-	-
<b>2.2 Proceeds from disposal of:</b>		
(a) property, plant and equipment	-	-
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
<b>2.3 Cash flows from loans to other entities</b>	-	-
<b>2.4 Dividends received (see note 3)</b>	-	-
<b>2.5 Other (provide details if material)</b>		
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(845)</b>	<b>(845)</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares	-	-
3.2 Proceeds from issue of convertible notes	-	-
3.3 Proceeds from exercise of share options	96	96
3.4 Transaction costs related to issues of shares, convertible notes or options	-	-
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings	-	-
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)		
<b>3.10 Net cash from / (used in) financing activities</b>	<b>96</b>	<b>96</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of quarter/year to date	11,219	11,219
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,669)	(1,669)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(845)	(845)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	96	96

<b>Consolidated statement of cash flows</b>		Current quarter	Year to date (3 months)
		\$A'000	\$A'000
4.5	Effect of movement in exchange rates on cash held	(256)	(256)
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>8,545</b>	<b>8,545</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b>	Current quarter	Previous quarter
	at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	\$A'000	\$A'000
5.1	Bank balances	3,993	1,126
5.2	Call deposits	4,552	10,093
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>8,545</b>	<b>11,219</b>

<b>6.</b>	<b>Payments to directors of the entity and their associates</b>	Current quarter
		\$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	542
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3	Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

N/A

<b>7.</b>	<b>Payments to related entities of the entity and their associates</b>	Current quarter
		\$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	198
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

N/A

8. <b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	193	153
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

N/A

9. <b>Estimated cash outflows for next quarter</b>	\$A'000
9.1 Research and development	452
9.2 Product manufacturing and operating costs	5,633
9.3 Advertising and marketing	106
9.4 Leased assets	71
9.5 Staff costs	832
9.6 Administration and corporate costs	718
9.7 Other (provide details if material)	-
<b>9.8 Total estimated cash outflows</b>	<b>7,812</b>

10. <b>Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)</b>	Acquisitions	Disposals
10.1 Name of entity	-	-
10.2 Place of incorporation or registration	-	-
10.3 Consideration for acquisition or disposal	-	-
10.4 Total net assets	-	-
10.5 Nature of business	-	-

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

31 October 2016

Sign here: .....  
(Director/~~Company secretary~~)

Date: .....

Nicholas Clark

Print name: .....

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.