

# QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED

31 March 2017



**ALEXIUM**  
SPECIALTY CHEMICALS AND SOLUTIONS



Attached is the fiscal quarterly report for the period ending March 31, 2017 for Alexium (“Alexium”, “the Company”).

Alexium continued robust growth during the period, with highlights being:

Cash Receipts of A\$6.6M for the period, a 25% increase over the previous period and a 73% increase in cash receipts over the last two periods. With this period cash receipts, the six-month total of A\$11.9M ending 03-31-2016 represents a 153% increase in cash receipts over the previous six-month period ending 9-30-2016 (A\$4.7). Year to date cash receipts have increased 682% over the same period in the prior year.

Revenue From Chemistry Sales for the period grew 425% over the same period in the prior year on as a result of increased core chemistry sales across several markets and customers.

Average Monthly Recurring Revenue now exceeding A\$2.0M per month following a rapid increase in sales of Alexicool into the bedding market.

Average Gross Margins well on track to exceed 40% in 2017 with Gross Margins in key markets on track to exceed 60% in 2017.

Cash Neutral Position remains expected for 2Q calendar 2017.





## Sustainable, Continuous Growth and Drive To Profitability

### Key Gross Profit Drivers

Cash outlays related to product manufacturing, and raw materials purchases increased 88% in preparation for the ramp up of several customer forecasts. The increase in these payments reflect a timing difference between acquisition of raw materials for the manufacture of finished goods and the revenue recognized in the later parts of the quarter. Outflows related to general and administrative expenses totaled A\$2.1M which are consistent with prior periods. As Alexium meets growth projections, our fixed and variable costs will continue to decrease as a percent of our total income. With increasing revenues and pre purchased raw materials for order fulfilment over the next quarter, combined with growing margins, Alexium's cash generation, reserves and available working capital facilities satisfy current projected cashflow requirements as orders continue to ramp up.

### Significant Expansion In Bedding Sector

**Mattress Components** – during the period, Alexium's presence in the mattress segment increased dramatically over the previous period. The Company expanded its presence from one brand through one chemical finisher to having its Alexicool technology applied to 12 different brands through a network of 6 finishers. Alexicool's strong performance continues to drive those six finishers to continue securing business with additional brands, as well as additional bed-lines, within their existing customer base. The run rate of chemistry increased from

negligible at the beginning of the period to over 140,000 pounds per month by the quarter's end, with substantial increases since the end of the period. Alexium recently set new weekly historical benchmarks in key metrics such as pounds of chemistry produced, pounds shipped domestically and pounds shipped overseas. Sales in this market already exceed our average margin target with further increases coming as Alexium makes key supply chain shifts mid-year.

**Pillow & Bedding Auxiliary Components** – Alexium continued to penetrate the pillow and bedding auxiliary market over the period. Alexium signed a limited supply exclusivity MOU with Pegasus Home Fashions in January which is being finalized this month following a highly successful launch of the pillow product at the New York Home Fashion show in NYC.



## **Pillow & Bedding Auxiliary Components, *continued***

As part of the agreement, Alexium and Pegasus will shift product development from the completed pillow effort to other bedding auxiliaries, such as mattress toppers, mattress pads, and duvets. Alexium structured the agreement to maximally protect Pegasus' market space while leaving open significant additional market space open for Alexium to pursue, for which discussions have already begun. Revenue from the Pillow & Bedding Auxiliaries is forecasted to be a major contributor to Alexium's growth in the 2nd half of 2017 and 2018.

## **New Technology Development**

**"Invisible" Phase Change Material** - Building on the success with PCM applications on pillows and bedding, Alexium has identified an opportunity to expand the use of PCMs on color fabric where standard PCMs, historically, could not be applied. This limitation is due to a "ghosting" effect on the fabric. Alexium's latest addition to the Alexicool line is invisible to the naked eye which allows it to be used on colored fabric. This advancement opens a wide range of markets that can integrate PCMs with non-white fabrics, such as upholstery, denim, workwear and fashion fabrics. Alexium is already working with a major supplier of retail apparel fabrics to incorporate our invisible Alexicool product into its offering, another sign of Alexium's extremely strong reputation and growing presence in the marketplace.

**Durable Moisture and Thermal Management** - Alexium's Alexicool product line works by using a proprietary chemistry which absorbs heat. There has been a different class of chemistry which has been used for years to achieve a similar effect but by a different mechanism – by wicking moisture away from the body. Over the first six months of launching Alexicool into various markets, a clear market gap was identified. A wide range of markets, particularly in apparel (under- and outer-wear) have expressed very high demand for a solution enabling the use of both chemistries to achieve maximum cooling in their products; however, those two technologies have never been integrated into a single durable application. Alexium has developed a first-of-its-kind product where we can now offer both heat-absorbing AND moisture-wicking functionality into the same highly-wash-durable application. This new product will allow Alexium to quickly address a large unmet need in this high value sector of the apparel market.





## **Military Strategy**

The military sector continues to be a strong area of focus for Alexium. The new administration has made increased defense spending a priority, and President Trump's request budget reflects a significant percentage increase over last year's enacted numbers. This increase bodes well for the service branches in procurement and research and development spending. Alexium continues working closely with the military to bring next generation flame retardancy to uniforms, and this increase in defense spending makes it far more likely that the Department of Defense will push forward with new contracts for both purchasing and innovation. This timing works well as Alexium has partnered with one of the major suppliers of uniform fabrics to the military with direct ties to procurement to maximize the potential breadth of Alexium's uniform launch. Alexium's trials with US Army through Natick and US Marines have been ongoing in terms of refinements in uniform weights and materials whilst waiting on a direction on spending and budgets from the new Administration.

## **Expansion Of Outdoor Fabric Strategy**

Early in the period, Alexium attended a series of production runs in China to scale up Alexiflam with a large tenting customer. The Production runs successfully met all performance criteria and specifications at competitive price points. Alexium's strategy in the Tenting fabric segment is now two-fold. The first is negotiating a robust supply agreement with our initial tenting customer which protects Alexium's access to the larger market while providing supply and testing guarantees for the customer. In addition, as an outgrowth of our collaboration in the SCRA program last year, Alexium has now partnered with major FR supplier ICL in a campaign to educate end retailers of the science and toxicological hazard profiles of a wide range of FR materials. This campaign is expected to drive the market to make more eco-conscious FR choices. Alexium and ICL have structured the effort to be mutually beneficial to both parties.

## **Licensing Efforts in FR Cotton and Polymers Continue to Move Forward**

In two key market areas, Alexium has created technology that the Company has strategically decided to offer large market players for exclusive licenses instead of growing the revenue organically. The first area is the >\$200M annual FR cotton chemistry market. During the period, Alexium continues to work with potential licensees to ensure our new Alexiflam NF chemistry passes the widest possible range of global FR standards to maximize the value for both Alexiflam and its licensee. That work has been very successful and during the period, continues to move along at a steady pace with no issues thus far. The second area is in epoxy resins for personal electronics. An initial major supplier to this market space remains in testing for products made with Alexium's Alexiflam SYN product. During the period, Alexium expanded its strategy to begin discussions with a global supplier into the epoxy market to license Alexium's technology and intellectual property to gain market share on a global scale far more rapidly than Alexium would be capable. Those discussions are ongoing and proceeding well.



## Additional Notes

**New Study Links Legacy FR Materials to Thyroid Cancer** – a new major study by two researchers at one of the US top University's, was released linking a large segment of legacy flame retardants, polybromyldiphenyl ethers (PBDEs), to papillary thyroid cancer. As they continue to research their findings, this study is the latest, and strongest, piece of evidence that value proposition that eco-conscious alternatives to legacy FRs, like those Alexium provides, are strong and increasing.

**Military Procurement** - The US federal government has ordered a complete review of all procurement procedures for all US federal government agencies to ensure that American companies are being afforded every opportunity to fulfill contracting needs. Alexium, based and operating in South Carolina, has been consistently ringing the bell of Buy American on Capitol Hill and direct with the DoD, as most legacy flame resistant chemistries currently used by the Department of Defense are made by foreign companies.

**EPA Review of Incumbent FR Technologies** - The Environmental Protection Agency continues its efforts to tackle dangerous chemicals of review under the newly enacted Lautenberg Chemical Safety Act. Asbestos, formaldehyde and several legacy FR components are all on the list for immediate review, and it is widely expected that after the six-month review, these dangerous and toxic chemicals will be banned, opening up an entire market for safe and cost effective replacements. Alexium is well positioned to benefit from this shift in the marketplace.

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### About Alexium

Alexium International Group Limited (ASX: AJX, AX:AJX, Nasdaq Designation: 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 US 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, waterproofing, oil proofing, and antimicrobial 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")**

31 March 2017

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date ( 9 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	6,471	15,589
1.2 Payments for		
(a) research and development	(471)	(1,755)
(b) product manufacturing and operating costs	(8,774)	(16,627)
(c) advertising and marketing	(84)	(294)
(d) leased assets	(69)	(197)
(e) staff costs	(1,536)	(4,334)
(f) administration and corporate costs	(674)	(2,343)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	2	11
1.5 Interest and other costs of finance paid	(253)	(258)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	212
1.8 Other (GST received)	24	101
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(5,364)</b>	<b>(9,895)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(36)	(1,581)
(b) businesses (see item 10)	-	-
(c) investments	-	-

Consolidated statement of cash flows	Current quarter \$A'000	Year to date ( 9 months) \$A'000
(d) intellectual property	(26)	(63)
(e) other non-current assets	(11)	(16)
2.2 Proceeds from disposal of:		
(a) property, plant and equipment	-	1
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(73)</b>	<b>(1,659)</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	179	663
3.4 Transaction costs related to issues of shares, convertible notes or options	-	-
3.5 Proceeds from borrowings	-	6,675
3.6 Repayment of borrowings	-	-
3.7 Transaction costs related to loans and borrowings	-	(126)
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	-	-
<b>3.10 Net cash from / (used in) financing activities</b>	<b>179</b>	<b>7,212</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	12,357	11,219
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(5,364)	(9,895)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(73)	(1,659)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	179	7,212

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date ( 9 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	(696)	(474)
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>6,403</b>	<b>6,403</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	3,313	11,215
5.2	Call deposits	3,090	1,142
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>6,403</b>	<b>12,357</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 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

<b>Current quarter \$A'000</b>
333
-

N/A

**7. Payments to related entities of the entity and their associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 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

<b>Current quarter \$A'000</b>
183
-

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	7,383	7,193
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	577
9.2 Product manufacturing and operating costs	7,195
9.3 Advertising and marketing	87
9.4 Leased assets	82
9.5 Staff costs	1,054
9.6 Administration and corporate costs	751
9.7 Other (provide details if material)	-
<b>9.8 Total estimated cash outflows</b>	<b>9,746</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		

