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## Alexium Introduces Perpetual Cooling Technology for Textile/Foam Products

### Highlights

- Alexium has developed Alexicool® Phonon™ technology, a new-to-the-world cooling approach that provides never-ending comfort to consumer products.
- This breakthrough cooling technology is poised to disrupt markets by continually regulating and removing heat from consumers, creating a perpetual cooling experience.
- Alexium is currently focusing on bedding applications for Phonon technology and is seeking innovative and technology-focused partners to expand the technology's application to the upholstery, medical, sporting goods, outdoor apparel/accessory, and other consumer market segments.

**Melbourne (Australia), Greer (South Carolina, US) – 4 August 2020:** Alexium International Group Limited (ASX: AJX) announced today a breakthrough technology for thermal management in textile- and foam-based consumer products. Phonon™ technology enhances the rate of cooling by up to 200% over current products and more importantly the cooling never stops. This patent pending technology establishes a new standard for extended cooling performance.

In addition to its perpetual cooling properties, the technology also provides a wide range of benefits that consumers care about, including:

- **Adaptive/responsive cooling:** The hotter a person gets, the more actively the Phonon product works to cool them.
- **Non-flammable, non-toxic, and environmentally friendly product:** Phonon products provide enhanced cooling performance without any increased hazards to consumers or the environment.
- **Lightweight:** Phonon products provide enhanced cooling at a significantly reduced weight relative to other cooling technologies.

This proprietary technology builds on years of research at Alexium and creates a new growth platform complementary to its Alexicool phase change materials (PCM). In contrast to PCM technology, which works by absorbing heat, Phonon technology builds on this by counteracting the insulative effects of

foams and textiles and constantly moving heat away from the consumer.

Given the Company's established position in bedding markets, these markets are the initial targets for commercial application of the new technology. The Phonon technology allows Alexium to significantly expand its offerings for total mattress cooling systems (TMCS) where a number of customer trials have proven the viability of this patent-pending, breakthrough technology platform. The total addressable market in the United States for cooling technologies in TMCS is estimated at US\$60m, with an additional US\$25m for top-of-bed applications. Beyond bedding applications, this technology has comparable opportunities in other notable markets, including upholstery, medical products, sporting goods, and outdoor apparel/accessories.

"Cooling technologies have become a critical selling feature for premium mattress manufacturers over recent years and Alexium has garnered a deserved reputation for leading technical innovation and analytics via its Alexicool products," said Dr. Bob Brookins, Alexium Chief Executive Officer. "Generally, technical innovation is incremental in nature and it is therefore particularly exciting to announce today a truly disruptive platform technology, one which we believe can change the narrative in relation to thermal management solutions – not just for the global mattress industry but also for several other performance applications in consumer products."

If you are an innovator looking to gain a first-mover advantage with this new technology, please contact Allen Reihman at [info@alexiuminternational.com](mailto:info@alexiuminternational.com).

### **About Alexium International Group Limited**

Alexium International Group Limited (ASX: AJX) is a performance chemicals and materials provider for advanced materials applications with a focus on flame retardancy and thermal management. The Company is driven by an innovation model for addressing market gaps with patent-protected technologies. These environmentally friendly solutions have applications for several industries and can be customized to meet customer needs. Key markets for Alexium are military uniforms, workwear, and bedding products. Alexium brands include Alexicool®, Alexiflam®, and Phonon™. For additional information about Alexium, please visit [www.alexiuminternational.com](http://www.alexiuminternational.com).

Authorised for release by Ms. Rosheen Garnon, Chair of the Board of Alexium International Group Limited.

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