



Alexium International Group Limited  
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## HALOGEN-FREE FLAME RETARDANT (FR) TREATMENT DEVELOPED FOR NYCOLON

- **Halogen-free FR treatment developed for nylon-cotton fabrics**
- **Key performance threshold for flame retardancy and wash durability established for life of garment**
- **Recent advancements also open up further opportunities in the polyester market, the most used synthetic fiber worldwide, with a market share of about 72%**

Perth, WA and Greer, South Carolina, Alexium International Group Limited (Alexium) (ASX:AJX, AX:AJX, OTC QX:AXXIY) announced today that it has successfully achieved a substantial technical and industry milestone for introducing a halogen-free flame retardant treatment for nylon-cotton blends to the market. Alexium will be introducing this halogen-free alternative under the Nycolon product series. This achievement is born from Alexium's proprietary Nycolon technology and further extends the application range for many markets. Alexium is currently working with potential customers on specific products based on this technology.

Over the past decade, halogenated flame retardants (HFRs) have received increasing scrutiny due to environmental and health concerns of HFRs such as Decabrom. Alexium's Nycolon technology is based on a non-leachable HFR that does not pose the same environmental/health problems. While Nycolon's chemistry satisfies any regulatory concerns for HFRs, Alexium's non-halogenated FR treatment for nylon-cotton blends was developed to satisfy market segments interested in halogen-free products. The halogen-free process is effective with fabric blends with up to 50% nylon content. This treatment provides a fabric that does not melt/drip, has excellent vertical flame test performance, and is durable for 50 wash/dry laundering cycles.

"Alexium's FR technology for synthetic/cotton blends has seen great advancements over the past year, and the halogen-free version is really a natural outgrowth of this. We are now focused on working with customers on product applications, as well as demonstrating the halogen-free technology for industrial laundering, including polyester-cotton blends," stated Dr. Bob Brookins, Alexium's Head of Research and Development.

In a further breakthrough, Alexium over the last month has successfully demonstrated FR treatments on polyester-cotton blends, further extending the textile application range. Polyester fiber is the most used synthetic fiber worldwide, with a market share of about 72%.

Its production cost are reasonably low, and it is also successfully used in many industrial and textile applications, as well as in the automotive industry. For over a decade, the world's polyester market has enjoyed a sustained annual growth rate of 7–9%. The total world polyester market is approximately 65 billion pounds, with nearly 46% going into the home furnishings, technical, and household textile markets.

For more information visit: [www.alexiuminternational.com](http://www.alexiuminternational.com)

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#### **About Alexium**

Alexium International Group Limited (ASX:AJX, AX:AJX OTC QX:AXXIY) holds proprietary patent applications 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 water proofing, oil proofing, anti-microbial, non-stick and UV protection. Applications under development include but are not limited to textiles, paints, packaging, glass and building materials. Alexium's fire retardant treatment for 95% Nylon based products is marketed under the Ascalon™ trademark. Alexium's fire retardant treatment for nylon blended materials such as nylon/cotton (Nyco), is marketed under the Nycolon™ trade mark.