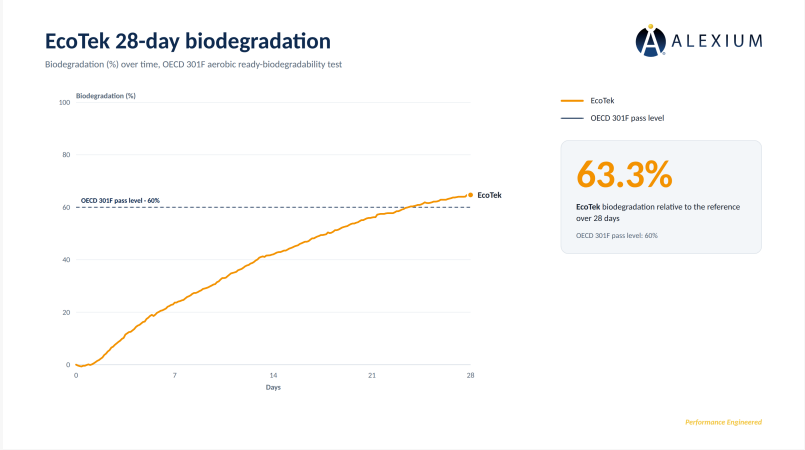
Alexium International Announces Launch of EcoTek, a new Biodegradable Microencapsulated Phase Change Material (mPCM)

New mPCM has passed OECD 301F biodegradation testing giving every market that builds with microencapsulated PCM a sustainability claim that outlasts the product



EcoTek Biodegradation Chart

GREER, SC, UNITED STATES, September 17, 2026 /EINPresswire.com/ -- Alexium International Group Limited (ASX: AJX), a leading specialty chemistry company delivering advanced thermal management and flame retardant technologies, today announced EcoTek, a new family of microencapsulated phase change materials (mPCMs) built on a biodegradable microcapsule that has passed biodegradation testing to the OECD 301F standard. EcoTek is designed for every market where mPCM already does the thermal work — bedding and textiles, apparel and footwear, furniture, building and construction, packaging and cold-chain logistics, electronics, transportation, life science and medical devices, and personal comfort and safety gear. EcoTek adds to the existing suite of industry leading mPCM solutions (NexTek, VivTek, and Micronal).

Microencapsulated PCM seals a phase change core inside a microscopic shell. The core absorbs heat as it melts and releases it as it re-solidifies, cycle after cycle, for the life of the product. Conventional capsule shells are engineered for one job: durability. EcoTek's shell is engineered for dual benefits: durability in use and biodegradation once the product's life is over. It moves Alexium's sustainability story beyond bio-based content, which describes where a material comes from, to biodegradability, which describes where it goes.

About OECD 301F Testing
The OECD 301F test is a standard manometric respirometry test that measures oxygen consumption in a closed system to evaluate the ready biodegradability of chemical substances in

an aerobic aqueous medium. Typically run for 28 days under controlled, dark, or diffuse light conditions, microorganisms in an unadapted aqueous inoculum (such as activated sludge) break down the test substance and a closed respirometer measures the oxygen consumed via pressure or volume changes. Biodegradation is reported as a percentage of the material's Theoretical Oxygen Demand (ThOD). The EcoTek microcapsule biodegradation in testing cleared the OECD 301F standard's 60% pass level.

EcoTek Performance
Biodegradability does not come at the expense of performance in the product. EcoTek capsules are engineered, like every Alexium mPCM, to withstand the processes that put them into a product like high-temperature drying, lamination, coating-line shear, foam and slurry formulation, and incorporation into building materials and packaging. EcoTek mPCM is also designed for to stay intact for the life of the finished product. The shell begins to break down only under the microbially active conditions the test methods simulate.

For thermal performance & stability, EcoTek performs like Alexium's mPCMs siblings and features melt points ranging from 27 to 31°C.

Quote from Alexium CEO Billy Blackburn:
“Brands have been asking us for a microencapsulated PCM they can stand behind at end of life as confidently as they stand behind it in use. EcoTek is that product. It performs like the PCMs our partners already utilize, and when the product's life is over, the capsule biodegrades.”

EcoTek at a glance:
- Biodegradable: Passed OECD 301F testing with biodegradation relative to the reference over 28 days exceeding the 60% pass level.
- Durable in use. Engineered to survive drying, lamination, coating-line shear, foam and slurry formulation, and to stay intact for the life of the product.
- Proven thermal performance. Comparable thermal effusivity and enthalpy results to Alexium’s portfolio of mPCMs.
- Broad application range. Textiles, foams, coatings, building materials, packaging, electronics, transportation and medical applications.
- Made in the United States. Supporting supply-chain resilience and consistent quality at commercial volume.

EcoTek is available now for partner evaluation, with commercial volumes planned for late 2026. Technical data, test summaries and evaluation samples are available at alexiuminternational.com or by contacting Alexium at (803) 715-3641 or info@alexiuminternational.com.

ISPA Sustainability Conference
Alexium is a proud sponsor of the upcoming ISPA Sustainability Conference taking place September 23rd-24th in Charlotte, North Carolina. Visit Alexium's tabletop at the show to learn

more about EcoTek and the company's other sustainable thermal regulation technologies or make an appointment at info@alexiuminternational.com.

About Alexium International
Alexium International Group Limited (ASX: AJX) develops and manufactures specialty chemistries for advanced thermal management and flame retardancy, including microencapsulated phase change materials (mPCM), formulated coatings, and flame retardant treatments for bedding, textiles, foam, building products and adjacent markets. Learn more at alexiuminternational.com

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