

PRESS RELEASE

Contact: Laura Bruce
Customer Service Manager
(864) 214-2218
Laura.Bruce@Dreamweaverintl.com

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DreamWeaver Gold™ Separator is designed for improved safety in large format lithium ion batteries

DreamWeaver Gold™ battery separator combines microfibers and nanofibers in a porous substrate that has very high temperature stability without significant thermal shrinkage--up to 300 C.

Large format batteries such as those used in electric vehicles, aircraft, grid storage or uninterrupted power supplies are more difficult to design for safety than cell phone or laptop batteries because each cell holds much more energy. Thermal events, as have happened recently in batteries in the Boeing Dreamliner, happen when the internal temperature of the battery rises to between 135 and 160 C. This temperature range corresponds to the melting point of traditional separators, and above this temperature the internal reactions can generate enough heat to result in thermal runaway, which can cause smoke, ignition and even explosions.

DreamWeaver Gold™ is stable for up to 150 C higher temperatures than these traditional membranes, which is expected to enhance the safety of large format batteries, offering significant advantages over conventional separators.

"By providing a battery separator with far higher temperature stability, we are giving battery manufacturers a tool to enhance their design of safety mechanisms, which is expected to significantly reduce the risk of ignition in high power, high capacity batteries," said Dr. Brian Morin, Dreamweaver's co-founder and the inventor of the patent pending technology.

To achieve its extraordinary thermal stability, Dreamweaver Gold™ uses Teijin's Twaron® aramid fiber as a high temperature microfiber scaffolding on which the nanofiber lattice network is built. Twaron is stable up to 500 C, is durable and chemical resistant. Twaron® aramid fiber has been used for over 30 years to provide structural integrity and thermal and electrical insulation in a wide variety of applications ranging from transformers, generators, printed circuit boards, heat shields and honeycombs, in addition to traditional ballistic and composite applications.

DreamWeaver Gold™ has the additional benefits of delivering higher power and being available at a lower cost than traditional membranes. "We have truly designed this product from the ground up for

mass markets, and it furthers our long-term goal of providing the lowest cost high technology battery separators in the world," said Jim Schaeffer, Dreamweaver's other co-founder and CEO.

DreamWeaver Gold™ is available for customer development in thicknesses from 25 to 40 microns, with rolls cut to customer specifications.

About Dreamweaver International

Dreamweaver is an advanced technology company whose products use a combination of nanofibers and microfibers to deliver best-in-class performance when used in lithium ion batteries. Dreamweaver was founded in 2011 by Jim Schaeffer and Brian Morin, and is headquartered in Greenville, SC. For more information call 864-214-2218 or visit our website at www.dreamweaverintl.com.

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