



29 May 2019

**BP POLYMERS, LLC and VERSARIEN® PLC ANNOUNCE COLLABORATIVE AGREEMENT for the DEVELOPMENT OF KORTRAX® BARRIER RESIN (BR) with GRAPHENE**

*Following upon the success of Kortrax® BR for Baritainer® HDPE containers, BP Polymers launches revolutionary product development initiative with VERSARIEN plc for graphene enhanced Kortrax® BR.*

Versarien plc (AIM: VRS), the advanced materials engineering group, is pleased to provide an update to the Company's 'USA Update' announcement of 9 May 2019 where it was stated that the Company had entered into an agreement with a US manufacturer of specialty plastic packaging and transportation vessels for volatile chemicals to explore the use of Versarien's graphene to enhance these products.

The agreement is with BP Polymers LLC ("BP Polymers") to develop a next generation version of BP Polymer's Kortrax® Barrier Resin ("Kortrax® BR"), incorporating Versarien's graphene, for use with high-density polyethylene ("HDPE") and polypropylene ("PP") containers.

Kortrax® is a polyamide-based barrier resin which improves both the chemical permeability performance profile and the oxygen transfer rate of HDPE base resin containers. Kortrax® BR included containers, trade marked as Baritainers®, can safely transport solvent-based products such as household chemicals, industrial chemicals, cleaning solvents, adhesives, wood preservatives, automotive additives and agricultural chemicals. Kortrax® BR, is also used in food applications requiring a barrier resin to prevent both permeation and oxygen contamination, and is FDA, EU and USP 661 compliant.

This collaboration agreement will be focused on improving the product performance of Kortrax® BR for the various markets it currently serves, through the addition of Versarien's graphene, while developing new opportunities in other industries. Utilizing the properties of Versarien's graphene, Kortrax® BR is expected to provide a superior barrier material for use with HDPE and PP base resins in multiple industry applications. This is expected to enable Kortrax® BR to provide enhanced polymer properties such as fire retardancy, static mitigation, oxygen resistance, and increased tensile strength, allowing for the use of less base resin.

**Kevin Callahan, COO of BP Polymers, stated:** "We look forward to working with Versarien in improving and developing Kortrax® barrier resins for packaging customers in multiple markets. With the announcement of this collaboration agreement, BP Polymers will continue to improve and enhance the performance characteristics



of Kortrax®. Both BP Polymers and our licensed converters working together will offer a unique and proven mono-layer HDPE and PP barrier container technology. As partners, we will be able to solve customer needs in a very cost effective and environmentally sustainable manner.”

**Neill Ricketts, CEO of Versarien plc, commented:** "We are very pleased to have entered into this graphene application collaboration agreement with BP Polymers, further broadening the sectors addressed by our partnerships. We believe that graphene has the potential to provide significant enhancements to the family of Kortrax® barrier resins, allowing BP Polymers to provide even better products for its customers.”

## **ABOUT BP POLYMERS, LLC**

BP Polymers was founded in 2009 after years of extensive materials research and product development. Based in California, BP Polymers is the sole US manufacturer of Kortrax® Barrier Resins. BP Polymers’ sister company, Barrier Plastics, Inc., is also located in Southern California and is the home of Baritainers®. For more information, please visit us at [www.bppolymers.com](http://www.bppolymers.com) or [www.barrierplastics.com](http://www.barrierplastics.com).

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## **ABOUT VERSARIEN, plc**

Versarien plc (AIM:VRS), is an advanced engineering materials group. Leveraging proprietary technology, the Group creates innovative engineering solutions for its clients in a diverse range of industries. Versarien has six subsidiaries operating under two divisions:

### **Graphene and Plastics**

2-DTech Ltd, which specializes in the supply, characterization and early stage development of graphene products. [www.2-dtech.com](http://www.2-dtech.com)

AAC Cyroma Limited, which specializes in the supply of vacuum-formed and injection-molded products to the automotive, construction, utilities and retail industry sectors. Using Versarien's existing graphene



manufacturing capabilities, AAC will have the ability to produce graphene-enhanced plastic products. [www.aaccyroma.co.uk](http://www.aaccyroma.co.uk)

Cambridge Graphene Limited, supplies novel inks based on graphene and related materials, using patented processes to develop graphene materials technology. [www.cambridgegraphene.com](http://www.cambridgegraphene.com)

Gnanomat S.L. ("GNA"), based in the Parque Cientifico Madrid, Spain, is a company capable of utilising Versarien's graphene products in an environmentally friendly, scalable production process for energy storage devices that offer high power density, almost instant recharging and very long lifetimes for use in electrical vehicles and portable electronics products. [www.gnanomat.com](http://www.gnanomat.com)

### **Hard Wear and Metallic Products**

Versarien Technologies Limited has developed an additive process for creating advanced micro-porous metals targeting the thermal management industry and supplies extruded aluminum. [www.versarien-technologies.co.uk](http://www.versarien-technologies.co.uk)

Total Carbide Limited, a leading manufacturer in sintered tungsten carbide for applications in arduous environments such as the oil and gas industry. [www.totalcarbide.com](http://www.totalcarbide.com)

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