

Conventus Polymers to Highlight Industry-Leading Material Solutions at 2018 SHOT Show in Las Vegas

PARSIPPANY, N.J., December 20, 2017 – Conventus Polymers LLC, a leading distributor of high-performance engineering thermoplastics, will showcase its leading-edge material solutions for the firearms industry at the 2018 SHOT Show® (Booth S2315), sponsored by the National Shooting Sports Foundation, Jan. 23-26 In Las Vegas. Conventus will highlight a broad range of high-performance thermoplastics that deliver high strength, high heat resistance, and dimensional stability for a broad range of firearm applications including stocks, magazines, receivers, rails, and a variety of other applications.

Conventus differentiates itself from competing material suppliers with a strong focus on addressing challenging performance and aesthetics requirements such as high filler content and cosmetics, while offering a range of unique formulations that utilize carbon fiber, long glass fiber, and other modification packages. Conventus' knowledge base and custom compounding abilities open up the design window for gun manufacturers, according to Alexander Fung, President of Conventus Polymers. The ability to offer greater strength and heat performance translates into more metal-to-plastic conversion possibilities, he said.

“Conventus’ product line addresses the increasingly challenging needs of firearm manufacturers who seek to reduce cost without compromising performance in highly demanding applications,” says Fung. “We work closely with our customers, utilizing our

material know-how and application development expertise to meet the requirements of critical end-use applications.”

Polymers have grown in popularity in the firearms market. In addition to lightweighting, they offer reduced recoil, corrosion resistance, serviceability, cost benefits, and design freedom. Increasingly, the company sees further adoption of polymers into various firearm components including pistol frames, lower receivers, upper receivers, magazines, front sights, rails, and other applications. For example, in 2016, the military approved the use of polymer magazines. Educating the design community is an important challenge for plastics suppliers like Conventus. A small minority of design engineers understand the capabilities of plastics in the production of firearms, according to Fung.

To create solutions for firearm customers, Conventus Polymers utilizes its expertise in other high-performance markets such as downhole oil and gas, where temperatures and pressures can be very high. The company’s primary product categories are specialty nylons, glass fiber and carbon fiber reinforced compounds, and long glass and long carbon fiber reinforced compounds.

In nylons, the company has been a leading developer of new material options to replace conventional glass-filled nylon 66, the standard bearer in the firearms industry which has faced performance limitations. Conventus has introduced resins like short glass fiber nylon 6/12 and polyphthalamide (PPA) for lower moisture absorption and higher modulus. For example, in shot gun components, these types of materials fill an important role by offering resistance to both arid and humid environments where traditional nylon lacks dimensionally stability. The company has also introduced polyphenylene sulfide

(PPS) and polyetheretherketone (PEEK) materials for higher temperature components, and long fiber-reinforced compounds to address concerns with impact and creep performance of short fiber reinforced nylon 66.

“We’ve helped with material selection and design guidance on numerous firearm parts,” explained Fung. “Combined with our nimble service and low MOQ’s, we can help designers get a product developed quickly and mitigate potential plastic design flaws, especially if they are used to working with metals.”

Conventus recently worked with a manufacturer to customize an exclusive material, a long carbon fiber reinforced PA66 resin that offers high modulus and outstanding creep resistance and strength without compromising impact resistance that short carbon fiber would impart. This was achieved using a combination of long carbon fiber and an unique impact modification package. Standard long glass-reinforced resins did not offer sufficient strength.

In another example, a new material option substantially improved surface appearance and reduced cycle time and warpage due to molded-in-stress commonly experienced in thick parts such as rifle stocks. Molders often need to run very high mold temperatures to improve resin surface appearance which adversely affects cycle time.

Among Conventus’ latest innovations is a new line of long fiber technology in custom MIL-SPEC colors and soft-touch polymers in custom colors. These have been commonly used in magazines and helmet components such as rails. The product portfolio also includes a full line of short glass-reinforced nylons, and impact and non-impact PA66 and PA6 in a variety of colors such as desert tan and flat dark earth.

Conventus is a one-stop shop offering small-volume production and just-in-time delivery to meet the speed-to-market needs of molders and firearm manufacturers. The company facilitates application development work with quick turnaround of samples for product prototyping.

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About Conventus Polymers LLC

Conventus Polymers LLC, based in Parsippany, N.J., is a global specialty thermoplastics distributor and formulator, offering the broadest portfolio of high-performance and ultra-polymers. Due to its highly focused approach within strategic vertical markets, the company offers deep expertise and forms close partnerships with industry leading OEMs to solve problems, develop new applications, and introduce the latest polymeric technologies. Conventus actively partners with producers who invest in and develop the world's next generation of thermoplastic materials. The company has a proven track record of bringing the latest resin technologies to its customers. It consults with its customers on their new product introductions from material to design to supply chain. For more information, visit www.conventuspolymers.com.