



Lubrizol Aims at Circular Economy with TPU Solutions for Footwear

May 16, 2019



CLEVELAND, May 15, 2019 – Lubrizol Engineered Polymers extensive portfolio of thermoplastic polyurethane (TPU) for performance footwear applications is designed to meet the growing demands of footwear producers. The increasing demands include having the ability to streamline the shoe manufacturing process, producing less material waste and using a more sustainable material option that still meets performance needs.

According to the U.S. Department of the Interior, Americans alone throw away at least 300 million pairs of shoes each year. These shoes end up in landfills, where they can take 30 to 40 years to decompose. This figure has inspired Lubrizol Engineered Polymers to engineer an innovative portfolio of advanced polymers to provide footwear producers the opportunity to create a nearly 100% TPU shoe that is recyclable* without compromising performance.

Justin Park, Lubrizol's global market segment manager for performance footwear says, "The advantage of a 100% TPU shoe is that at the end of the shoe's wear cycle it can be re-grounded and then reformed into a new shoe, therefore extending the life of the product and material."

Lubrizol Engineered Polymers advanced TPU portfolio for footwear applications gives footwear producers the opportunity to collaborate with one solution provider for their needs. Another benefit to footwear producers of using Lubrizol Engineered Polymers TPU as the prime material for shoe production is having the ability to reuse the scraps, resulting in less unused material during the manufacturing process.

The key technologies in Lubrizol's Engineered Polymers TPU portfolio for performance footwear that can be used to form almost every component of a shoe include Esdex™ TPU for upper yarns to keep shoe construction smart and lightweight, BounCell-X™ a low density, plasticizer-free, recyclable*, thermoplastic foam for cushioning, Estane® TRX TPU as a functional alternative to rubber outsoles, Pearlthane™ ECO TPU a bio-based** renewable-sourced material, Estan® 3D TPU a soft, flexible material that offers design freedom for 3D printed components, and Pearlbond™ TPU for adhesives assembly that provides flexibility to join a large variety of substrates together.

Lubrizol Engineered Polymers has released a video to help support and promote its extensive TPU footwear portfolio for performance footwear applications, *One Shoe. One Material. One Earth.* that can be viewed here <https://youtu.be/Pn3SBu5JTjE>

About Lubrizol Engineered Polymers

With more than 60 years of experience and a worldwide network that includes formulation design, manufacturing, R&D and cutting-edge technologies, Lubrizol Engineered Polymers offers one of the broadest portfolios of engineered polymers available today including resins that are bio-based*, recyclable**, light stable, flame retardant, adhesive, chemically resistant, optically clear and fast cycling. Our technology crosses many industries and applications,

including surface protection, power and fluid systems, sports and recreation, wearable devices, electronics and automotive. For more information, visit www.lubrizol.com/engineered-polymers or contact engineeredpolymers@lubrizol.com.

About The Lubrizol Corporation

The Lubrizol Corporation, a Berkshire Hathaway company, is a market-driven global company that combines complex, specialty chemicals to optimize the quality, performance and value of customers' products while reducing their environmental impact. It is a leader at combining market insights with chemistry and application capabilities to deliver valuable solutions to customers in the global transportation, industrial and consumer markets. Lubrizol improves lives by acting as an essential partner in our customers' success, delivering efficiency, reliability or wellness to their end users. Technologies include lubricant additives for engine oils, driveline and other transportation-related fluids, industrial

lubricants, as well as additives for gasoline and diesel fuel. In addition, Lubrizol makes ingredients and additives for home care, personal care and skin care products and specialty materials encompassing polymer and coatings technologies, along with polymer-based pharmaceutical and medical device solutions.

With headquarters in Wickliffe, Ohio, Lubrizol owns and operates manufacturing facilities in 17 countries, as well as sales and technical offices around the world. Founded in 1928, Lubrizol has approximately 8,700 employees worldwide. Revenues for 2018 were \$6.8 billion. For more information, visit Lubrizol.com.

**Recyclability is based on access to a readily available standard recycling program that supports such materials. Products may not be available in all areas.*

***Bio-based content as certified in accordance with ASTM D-6866.*

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Web Sites

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