**New, High-Temperature, Fluorinated Rubber from Freudenberg Offers Excellent Sealability**

**Plymouth (USA), December 6, 2017. Global automotive standards calling for higher fuel economy and lower emissions during the next decade continue to drive substantial changes in the industry. Vehicle manufacturers are pursuing a range of powertrain responses including electric drivetrains, hydrogen fuel cells, nine- and 10-speed transmissions and smaller, more powerful, turbocharged engines. At the heart of these technologies are seals that will continuously function in environments that operate under higher temperatures and pressures with new lubricants in tighter installation spaces.**

Freudenberg-NOK Sealing Technologies, a global leader in the development of engineered elastomers, has introduced a new family of proprietary fluorinated rubber to meet static seal challenges. The materials offer excellent sealing capabilities under very high temperatures and pressures, ease installation challenges and are cost competitive against more expensive perfluorinated material options. The new rubber can also be custom mixed to meet specific powertrain engineering requirements.

Freudenberg-NOK, which runs the business operations for global seal manufacturer Freudenberg Sealing Technologies in the Americas, has had the new fluorinated materials under development for the past four years. Unlike traditional fluorocarbon rubber, which effectively handles temperatures ranging from -40° to+235°C, the new formulas effectively seal at temperatures ranging as high as 270°C.

In addition, Compression Stress Relaxation (CSR) testing performed by Freudenberg-NOK on the high temperature fluorinated materials demonstrated exceptional sealing capability. The elasticity of these materials is maintained along with their flexibility after prolonged high temperature air exposure. Extensive laboratory analysis shows that the chemical resistance for which fluorinated rubber is known and used remains uncompromised.

“We know our customers are being challenged on multiple fronts to develop innovative vehicle system solutions, and we are working with them to meet these challenges through the development of new materials and compounds,” said F. Joseph Walker, Global Technology Director, Materials and Laboratory Services for Freudenberg-NOK Sealing Technologies. “This new family of fluorinated rubber materials, for example, is especially suitable to the high heat, high pressure, static seal environment associated with turbocharging.”

Elastomeric seals are essential to the efficiency of all powertrain technologies. Freudenberg Sealing Technologies is focused on developing effective sealing solutions for new technologies like electric vehicle systems and fuel cells as well as new internal combustion engine designs. During a recent industry conference, the company introduced a portfolio of unique smart materials that combine different properties to achieve sensor and actuator functions in seals. The company’s state-of-the-art material testing and analysis further assures customers that its component solutions function in real world systems where fluids, pressures, temperatures and designs vary widely by model, manufacturer and region.

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***Image:*** *FST\_PP\_HighTempRubber.jpg*

**About Freudenberg Sealing Technologies**

As the leading specialist in sealing applications and their markets, Freudenberg Sealing Technologies (FST) is a supplier as well as a development and service partner serving customers in a wide variety of sectors including the automotive industry, civil aviation, mechanical engineering, shipbuilding, the food and pharmaceuticals industries, and agricultural and construction machinery. Freudenberg-NOK Sealing Technologies runs the business operations for FST in the Americas. The company is headquartered in Plymouth, Mich. and operates more than 20 facilities across the Americas. In 2016, Freudenberg Sealing Technologies generated sales of more than €2.3 billion and employed approximately 15,000 people. More information at [www.fst.com](http://www.fst.com)

The company is part to the global Freudenberg Group which, with its Business Areas Seals and Vibration Control Technology, Nonwovens and Filtration, Household Products as well as Specialties and Others. In 2016, the Group generated sales of more than   
€8.6 billion in and employed approximately 48,000 associates in around 60 countries. More information is available at [www.freudenberg.com](http://www.freudenberg.com).

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