**PRESS RELEASE**

**Safe and efficient energy storage**

***Freudenberg Performance Materials is presenting innovative solutions for e-mobility and stationary energy storage from
May 9 – 12, 2017 at Techtextil 2017 in Frankfurt/Main, Germany.***

**Weinheim, Germany, May 9, 2017. Efficient, safe batteries are a key factor for renewable energies to gain ground in power generation, to achieve the breakthrough in e-mobility and to supplement existing energy sources. Freudenberg Performance Materials is presenting innovative solutions for various storage technologies in Hall 3.1, Booth F37 at Techtextil 2017: ultra-thin, ceramic impregnated separators for lithium-ion batteries, gas diffusion layers for fuel cells, and high-performance electrodes for redox flow batteries. Further highlights include solutions for apparel, home textiles, automotive and building interiors.**

**Greater safety for lithium-ion batteries**

One key to the success of e-mobility is providing more efficient and safer batteries. That is why Freudenberg developed the safety separator for lithium-ion batteries. It consists of an ultra-thin PET nonwoven impregnated with ceramic particles. It remains stable at temperatures of up to several hundred degrees Celsius and does not shrink. In comparison to conventional products, it is considerably less sensitive to mechanical penetration, particularly at high temperatures. Another plus is that using the safety separator helps to reduce the production cost of lithium-ion batteries. Higher temperatures can be used allowing accelerated preparation of the battery cells through a faster drying process and increased electrolyte impregnation speed.

**Mass-produced gas diffusion layers for fuel cells**

Today, fuel cells are already in use in several applications and they are considered to be a key energy source of the future. Freudenberg’s gas diffusion layers help to improve the efficiency of this technology. Their high uniformity in structure and thickness increases electrical and thermal conductivity and improves the transport of gases and liquids in the fuel cell. The outstanding product features have already been proven in numerous very different customer applications. Further strengths of Freudenberg’s gas diffusion layers compared with other products are superior downstream processing and exceptional surface properties.

**Higher efficiency for redox flow batteries**

Redox flow batteries are in demand wherever large amounts of energy must be stored over several hours for release at any time. For example, they can stabilize the natural output fluctuations of power generation from renewable sources. They can shave peak demand from power stations and also provide high-performance energy storage in closed systems such as solar plants in isolated locations. A key aspect is optimizing efficiency. Freudenberg’s nonwoven electrodes with a unique three-dimensional fiber structure were specially developed to improve liquid circulation in these flow batteries. These innovative electrodes have a flexible design so that they can be adapted to suit customers’ wishes.

**Further innovative technical textiles**

Freudenberg Performance Materials will also be showcasing the world’s first fiberball padding for the thermal insulation of sportswear and outdoor jackets, Evolon® super-microfilament textiles for pillows, duvets, sleeping bags and other quilted products, eco-friendly carrier materials for carpet tiles and printable automotive headliners.

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About Freudenberg Performance Materials

Freudenberg Performance Materials is a leading global manufacturer of innovative technical textiles offering differentiated value propositions to a broad range of markets and applications such as Apparel, Automotive, Building Materials, Hygiene, Medical, Shoe and Leathergoods as well as Specialties. In 2016, the company generates sales of more than €950 million and has 25 manufacturing sites in 14 countries and almost 3.800 employees. Freudenberg Performance Materials attaches great importance to social and ecological responsibility. For more information, please visit www.freudenberg-pm.com

In 2016, the Freudenberg Group employed more than 48,000 people in almost 60 countries worldwide and generated sales of approximately €8.6 billion (including pro-rata consolidation of 50:50 joint ventures). For more information, please visit www.freudenberg.com