

Press Release

Germany Ranked Third in World Travel League

Innovative Mobility Products from Freudenberg Group

Weinheim, Germany. July 10, 2018. In 2017, Germans spent a total of 84 billion euros on roughly 70 million journeys abroad. Germany is thus ranked third behind China and the US among the world's travel champions according to the World Tourism Organization. An average journey lasts 13 days, the most popular destinations are Spain, Italy and Turkey. The car is the most preferred means of travel followed by the airplane. The Freudenberg Group offers innovative mobility solutions that make car and plane travel better and easier. Three examples: Light-weight nonwoven acoustic pads reduce noise in electric car interiors and create hardly any weight. Vehicle cabin filters remove nearly 100 percent of harmful particles from the air and reduce air contaminants in vehicles. Highly robust seals on tires, brakes and in engines help keep airplanes safe.

How does it work? Airplanes use very robust sealing rings in their landing gear, brakes, engines and flight control systems. These components are exposed to the greatest loads when taking off and landing. The Freudenberg Sealing Technologies Business Group has special seals for the airplane hull, such as those in the cabin, the luggage hold or the windows to make sure the plane has a safe flight - as external air pressure and internal cabin pressure different significantly at cruising altitude. Freudenberg has also developed a series of PTFE seals especially for the aerospace industry. The material is uniquely suited for aerospace applications, where high resistance to extreme temperatures and high contact pressures as well as

Press Contact

Astrid Kasper
Freudenberg & Co. KG
Director Corporate Communications
Tel. 06201 80-6688
Fax 06201 88-6688
astrid.kasper@freudenberg.com
www.freudenberg.de

Martina Muschelknautz
Freudenberg & Co. KG
Corporate Communications
Tel. 06201 80-6637
Fax 06201 88-6637
martina.muschelknautz@freudenberg.com
www.freudenberg.de

reliable protection are important. Freudenberg produces more than 200 material mixtures specifically for aerospace applications, such as engines and transmissions, landing gears, radar, brakes and window seals.

To lower fuel consumption, airplane manufacturers use state-of-the-art composite materials for certain components. A composite material is one made from two or more integrated materials, whose properties differ from those of each individual component. The Freudenberg Chemical Specialities' Chem-Trend business area has developed a water-based separating agent for use in airplane manufacturing, which is especially suited for the use in the design of state-of-the-art composite materials for airplane parts. As a water-based product, it is environmentally friendly and works without releasing solvent fumes during production. Freudenberg innovations thus make sure airplane technology functions smoothly and for a safe arrival at vacation destinations.

Nonwovens for quieter electric vehicle cabins

Good acoustics are particularly important for electric vehicles, because alternative drives are quieter than combustion engines and other noises are perceived more clearly. The Freudenberg Performance Materials Business Group has developed innovative acoustic pads that are excellent at absorbing noise in vehicle cabins. The light-weight pads help reduce vehicle weight. They can be used in vehicle door linings and floor areas.

Highly efficient lubricant fluids from Klüber Lubrication prevent undesired noise in vehicle interiors. Developed especially for to provide service-life lubrication for seals, guides and plastics; the non-evaporating lubricant forms a lubricating film. This makes sure that high frictions spots receive an optimal supply of lubricant over long periods of time. To make new mobility possible, Freudenberg Performance Materials also supplies

nonwovens as battery separators and high-tech nonwovens for fuel cells.

Light nonwovens help reduce fuel consumption

Another innovation: A multi-layered composite structure for underbodies and wheel wells. The material has a longer service life, increased friction resistance as well as improved temperature resistance and tear-resistance. The composite is also 15 to 20 percent lighter than available products and up to 100 percent recyclable. Special nonwovens for luggage compartment covers weigh less than comparable materials and help reduce fuel consumption.

Clean and pollutant-free air in cars is particularly important for allergy sufferers. Pollen, diesel fumes and bacteria in the air can trigger unpleasant symptoms such as asthma, sneezing and headaches. Vehicle cabin filters from the Freudenberg Filtration Technologies Business Group use a specially developed nonwoven layer that filters nearly 100 percent of pollutants from the air, preventing contamination of the ventilation system and reducing windshield fogging.

To reduce noise and vibrations that the street or the engine can create in a car, Freudenberg offers engine, transmission and chassis mounts, air spring systems as well as dampers from the Freudenberg Business Group, Vibracoustic. They make cars quieter and more comfortable.

All these innovative solutions from the Freudenberg Technology Group improve mobility in cars and airplanes. Travelers can reach their destinations safely and enjoy their vacations.

About the Freudenberg Group

Freudenberg is a global technology group that strengthens its customers and society long-term through forward-looking innovations. Together with its

partners, customers and research institutions, the Freudenberg Group develops leading-edge technologies and excellent products and services for more than 30 markets and for thousands of applications: seals, vibration control components, nonwovens, filters, specialty chemicals, medical products, IT services and the most modern cleaning products.

Strength of innovation, strong customer orientation, diversity, and team spirit are the cornerstones of the Group. The 169-year-old company holds strong to its core values: a commitment to excellence, reliability and pro-active, responsible action.

In 2017, the Freudenberg Group employed approximately 48,000 people in some 60 countries worldwide and generated sales of more than €9.3 billion.

For more information, please visit www.freudenberg.com.