

SAINT-GOBAIN COMPONENTS DRIVE ADVANCES IN AUTOMOTIVE FRICTION CONTROL AND MANUFACTURING PERFORMANCE

Composite Bearings and Tolerance Rings Enhance Efficiencies for Automotive OEMs
The global automotive market is putting increasing demands on Original Equipment Manufacturers (OEMs) to produce high-performance parts that are affordable and long-lasting. Saint-Gobain Performance Plastics is helping OEMs meet these demands with its range of innovative NORGLIDE® composite bearings and RENCOL® tolerance rings, displayed at Vehicle Dynamics Expo 2012 in Stuttgart, Germany. Ideal for powertrain, chassis, and interior and exterior vehicle applications, Saint-Gobain's composite bearings and tolerance rings optimise component manufacturing and driving performance and comfort for the end-consumer.

The trend towards increasing efficiencies within the powertrain and chassis components helps to bring about savings in fuel and meeting carbon dioxide (CO₂) reduction targets. NORGLIDE® composite bearings and RENCOL® tolerance rings allow the benefits of increasing efficiencies of individual components to be realised by using the materials to help improve friction control and reducing noise, vibration and harshness (NVH). NORGLIDE® composite bearings incorporate a thick layer of selflubricating liner made from polytetrafluoroethylene (PTFE), offering controlled friction values that perform under axial and radial stress to improve NVH reduction. The spring-like qualities of RENCOL® tolerance rings ensure a tight fit between bearings, shafts and housing. Protrusions running along the circumference of RENCOL® tolerance rings efficiently absorb NVH transmitted through mechanical joints within a vehicle's chassis and powertrain.

Steering Yoke

At Vehicle Dynamics Expo 2012, Saint-Gobain demonstrated a steering yoke with NORGLIDE® composite bearings. By using a thick layer of PTFE, NORGLIDE® composite bearings reduce friction in the steering yoke, improving steering feel and response. This enhances a motorist's ability to feel the road surface and ultimately improves driving experience.

Car Seat Armrest

Saint-Gobain also exhibited a car seat armrest fitted with RENCOL® tolerance rings to enhance torque control. By incorporating a certain amount of friction, arm rests stay in place and are prevented from falling down. The controlled friction ensures a quality feel and consumer perception of performance and luxury.

Dual mass flywheel

By incorporating NORGLIDE® composite bearings, dual mass flywheels dampen the vibrations from a car's engine and prevent vibrations from reaching the gearbox. This results in a more comfortable driving experience for motorists.

Hinges

By incorporating PTFE in its NORGLIDE® composite bearing, Saint-Gobain is able to control torque in hinges to exact specifications. NORGLIDE® composite bearings can be used on metal frames without compromising painting operations.

"Automotive OEMs are looking for custom designed, innovative components that improve efficiency and offer long-lasting durability. Saint-Gobain is meeting OEM needs while ensuring improved driver comfort and enjoyment," said Chris Needes, Global Market Manager Automotive Chassis and Powertrain, Saint-Gobain Performance Plastics.

About Saint-Gobain Performance Plastics Bearings and Tolerance Rings SBU

Saint-Gobain is a global leader in the design, production and distribution of innovative, high performance materials for industry and employs around 195,000 people. With operations in over 64 countries, Saint-Gobain is the 60th largest employer and among the top 100 global industrial companies worldwide.