



PARTNER SUCCESS STORY featuring **Schlösser**

Schlösser and Rogers Team Up to Provide Innovative Solutions Rogers PORON® and BISCO® Materials Provide Significant Benefits for Sensor Manufacturer

Sensors are the eyes and ears of the future - indispensable in our day-to-day activities. Whether found in automotive driver assistance systems, a home refrigerator, a lawn mower, or door and light technology, sensors are in use all around us. What's more, their importance will continue to increase in the future, especially in the areas of autonomous driving, industry, and telemedicine. Yet, while sensor applications continue to grow, the criticality of those sensors (and expectations of their performance) continues to grow as well. The failure or malfunction of a driver assistance system for example, could endanger life and limb. Safety, therefore, is becoming increasingly important.

CUSTOMER PROBLEM

After a device failure and recall in several countries with subtropical climates, a leading European sensor manufacturer approached Schlösser, a Rogers trusted partner, for assistance. The company had been using various types of foam such as cellular rubber and PVC in their sensors. An analysis of the field failures revealed that the cellular rubber seals in the sensors were releasing sulphur, which subsequently caused a short circuit of the sensor's circuit board.

THE SOLUTION

After extensive consultation, PORON® polyurethane foam material was proposed by Schlösser as an alternative and tested. After extensive testing, the manufacturer chose to use various formulations of PORON polyurethane for the sensor gaskets, buffers, casting barriers and other components. No further field failures have occurred.

After a successful solve of their initial problem, the sensor manufacturer approached Schlösser with a new task. Some of their customers had placements of the company's sensors in environments where extreme conditions were common. As polyurethane does not perform reliably after reaching its physical temperature limit, other material options needed to be explored.

Silicone materials were tested by the sensor manufacturer, but were taken out of consideration due to contamination from the outgassing of VOCs at high temperatures. However, after a consultation with Schlösser, the manufacturer decided to test Rogers' BISCO® platinum cross linked silicone foam in their own materials laboratory.

THE RESULT

After extensive testing, BISCO silicone foam materials were approved for use in the manufacture of sensors that would ultimately operate in harsh environmental conditions. Due to their proven success in the field, multiple formulations of BISCO materials are now being used by the manufacturer. In addition to the excellent performance and reliability of Rogers' PORON and BISCO solutions, the manufacturer is especially pleased that the products are UL certified throughout the entire supply chain, from raw material to end product.



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