

CAPPED

PPG Aerospace fastener sealant caps improve productivity for aerospace company

BAE Systems, a U.K.-based defense, security and aerospace company, has reduced process and application time with less waste and better aesthetics with sealant caps from PPG Aerospace. The custom-made caps, used to seal fasteners on avionics racks for Typhoon aircraft, earned the BAE Systems-PPG Aerospace team a BAE Systems 2008 Bronze Chairman's Award for productivity.

PRC seal caps are small caps molded from liquid PRC sealant that cures to form a flexible rubber shell. The cured caps are then filled with more sealant and frozen to stop curing. To use, the seal caps are thawed, then applied over the fasteners to cure, affording higher quality, less waste and better uniformity than traditional extruded application.

When compared with wet sealing, the PRC caps provide BAE Systems with a 20% labor savings and 50% process time reduction for the more than 200 fasteners on each of six racks for each aircraft. Technicians defrost only the number of seal caps needed, thus reducing waste. In addition, the identical-looking fasteners offer a neater appearance.

"The PPG seal caps cost more to purchase than the wet sealant we used previously, but this is more than covered by the advantages they bring in improving operator productivity and reducing cycle time," said Tim Meakin, Avionics Racks Department team leader at BAE Systems' airframe engineering and manufacturing site in Sarnesbury, UK.

BAE Systems had used PPG Aerospace's PR-1770 fuel tank sealant, which was manually extruded onto fasteners on six-sided avionics racks measuring about 18 x 18 x 6 inches. Dick Surtees, PPG Aerospace account manager at the Sarnesbury, U.K., Application Support Center, suggested using PRC seal caps.

"With so many small fasteners located in such a tight area, it was a challenge for BAE Systems' technicians to apply wet sealant," Surtees said. "PRC seal caps are supplied in ready-to-use trays that are laid out at the workstation, thawed, then easily applied over the fasteners. They also require less drying time than wet sealant."

BAE Systems initially considered an existing seal cap size, but Surtees said it exceeded product weight limits. "We [then] produced prototypes for a smaller cap that exactly matched the profile of the fastener heads and adjusted the wet sealant fill. These were



PRC seal caps by PPG Aerospace are small caps molded from liquid PRC sealant, which is then cured, filled with the same sealant, and frozen. Customers thaw and apply seal caps over fasteners where they cure, affording higher quality, less waste and better uniformity than traditional extruded gun application.

applied to test panels and compared against wet-sealed fasteners. The custom seal caps weighed the same, and the BAE Systems design department approved their use."

BAE Systems uses PRC seal caps that are made of and filled with the same PR-1770 fuel tank sealant that had been used previously, so additional qualification was not needed.

Empty caps are made at PPG Aerospace's Application Support Center in Mississauga, Ontario, Canada, sent to Sarnesbury for filling and freezing, then delivered to BAE Systems in Sarnesbury.

ABOUT BAE SYSTEMS

BAE Systems is a premier global defense, security and aerospace company delivering a range of products and services for air, land, and naval forces, as well as advanced electronics, security, information-technology solutions, and customer support services. BAE Systems has about 105,000 employees worldwide and reported over £18.5 billion (US\$34.4 billion) in sales in 2008.

BAE Systems' Chairman's Awards recognize the company's employees, colleagues and industry partners for the new and innovative ways in which they shape the company and contribute toward its global success.

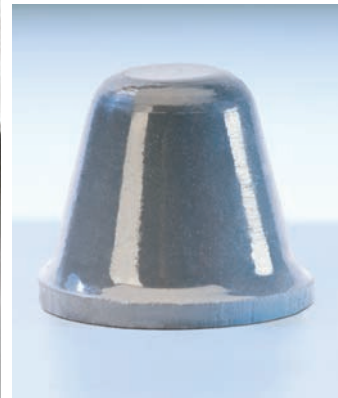
ABOUT PPG

Pittsburgh-based PPG is a global supplier of coatings, optical products, specialty materials, chemicals, glass and fiber glass. The company has more than 140 manufacturing facilities and equity affiliates, and operates in over 60 countries. Sales in 2008 were \$15.8 billion.

PPG Aerospace is the aerospace products and services business of PPG Industries. PPG Aerospace-PRC-DeSoto is a leading global producer and distributor of aerospace coatings, sealants, and packaging and application systems.

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