



Fluoropolymers Are Taking Flight in Aerospace

Fluoropolymers have a long history of being used in a range of lab applications, but we believe they can offer numerous benefits to the aerospace industry.

Both machined PTFE (Polytetrafluoroethylene) and injection molded PFA (Perfluoroalkoxyalkanes) have been used to a limited extent in creating select plane components. Though, with the push to produce lighter, more fuel-efficient aircraft, a larger market for fluoropolymers is developing.



Savillex is a World Leader in Custom Engineered Fluoropolymer Components

We specialize in manufacturing high performance plastics for demanding environments. Our custom-engineered components are used all over the world and in a range of applications – from supporting fuel lines in passenger aircraft, to lab and filtration equipment.

Fluoropolymers Take Flight – Practical Applications in Aircraft

Working in partnership with a leading manufacturer, Savillex developed customized, molded PFA clamp inserts for the fuel and hydraulic lines within an aircraft's composite wings.

To be viable, these components needed to be non-flammable. They also needed to be non-reactive to jet fuel, as the clamps are completely immersed within the fuel tank. Finally, the components had to have high lubricity (low friction), given that the fuel and hydraulic lines slide through the clamp inserts as the wings flex in flight.

Fluoropolymers – molded PFA, in particular – were the only materials that had the required non-flammability and lubricity properties.

What's more – PFA fluoropolymers are extremely durable and resilient materials that can survive working temperatures of as low as -200°C and as high as 260°C.

Other logical places for fluoropolymers (beyond an aircraft's fuel/hydraulic system) could include electrical connectors, bearings and fasteners – to help support and protect a plane's intricate systems – as well as lavatory and galley accessories.

Flexible, Cost-Effective and Customizable Materials

Any component used in aerospace that is currently manufactured from machined polymers has the potential to be made more cost-effectively, quickly and precisely with molded PFA.

Savillex brings expertise in designing specialized tooling, so that complex PFA components can be manufactured at lower per-unit costs than machined PTFE parts. The PFA molding process can also be scaled up or down depending on part demands while maintaining tight quality control and flexibility.

Your Partners in PFA

Working in partnership with you, Savillex engineers will develop an in-depth understanding of your application and part requirements, while also identifying opportunities for improvements and enhancements. Want to learn more about how PFA can be customized to fit a range of aerospace applications? Drop us a line and let's get in touch.

www.savillex.com

