THERMOPLASTICS

STRONG, LIGHTWEIGHT AND CORROSION RESISTANT

Providing advanced components for military flight controls

Collins Aerospace is a leading manufacturer of advanced thermoplastic composite structures – offering reduced weight, increased strength and improved overall performance.

Our breakthrough technology and automated processes create strong, lightweight thermoplastic flight control components.

With lighter components, your aircraft can meet mission weight requirements now and into the future.

Collins thermoplastic flight control components are corrosion resistant, cost-effective and strong enough to endure extreme military applications.

Parts are manufactured as one piece, reducing part count and decreasing assembly time. When compared with traditional metallic or metallic/composite hybrid structures, our thermoplastic components are structurally strong, lighter weight and lower cost.

KEY FEATURES & BENEFITS

- Cost-efficient manufacturing process
- Corrosion, fire and chemical resistant
- High damage and ballistic tolerance
- Repair on or off wing

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Additional features and benefits

THERMOPLASTICS

- Highly automated, out-of-autoclave processing
- Stamp forming
- Automated Fiber Placement
- Joining/welding
- Fire and chemical resistant
- High temperature tolerant
- Impact/fatigue tolerant
- Up to 30% cost savings and 40% cycle time reductions

LIGHTNING STRIKE-CAPABLE

This is an important capability for flight control surfaces, which tend to be located at aircraft extremities and are susceptible to lightning strikes. We use conductive ply layers in the composite layup matrix to provide paths to an electrical ground.

EASE OF REPAIR, ON AND OFF WING

Our all-laminate composite construction, without a honeycomb core, means the component is easy to maintain and repair using proven and available standard methods.

Specifications subject to change without notice.

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