Aircraft Interiors
Solution

Roadmap to AM Qualification

The Stratasys® Aircraft Interiors Solution (AIS) provides an easier path for the qualification of additively manufactured (AM) parts for aircraft applications. The AIS Machine Readiness Package offers aerospace companies a set of tools, documentation and training to help them accelerate critical steps in their qualification programs. Whether the customer is looking to implement FDM® production on new aircraft platforms or leverage the supply chain benefits of AM for MRO applications, the AIS package will prove to be a critical enabler for implementation success. The AIS package also cuts substantial time and cost out of the AM qualification process. Critical components to the solution include the FST-compliant ULTEM™ 9085 CG resin material and the high-performance, low-variability Fortus 900mc™ additive manufacturing system.

In addition to the AIS offered by Stratasys, the National Center for Advanced Materials Performance (NCAMP) has released the ULTEM™ 9085 CG resin materials database. This is the first additively manufactured material tested under the NCAMP process.[1]

[1]The NCAMP process is based on and currently supports the Fortus 900mc configuration. The Stratasys F900™ configuration is in the process of being added to the NCAMP qualification. The NCAMP material specification NMS085 is pending full implementation by Stratasys and material compliant for equivalency qualification is available. Please contact NCAMP for more information prior to beginning qualification.

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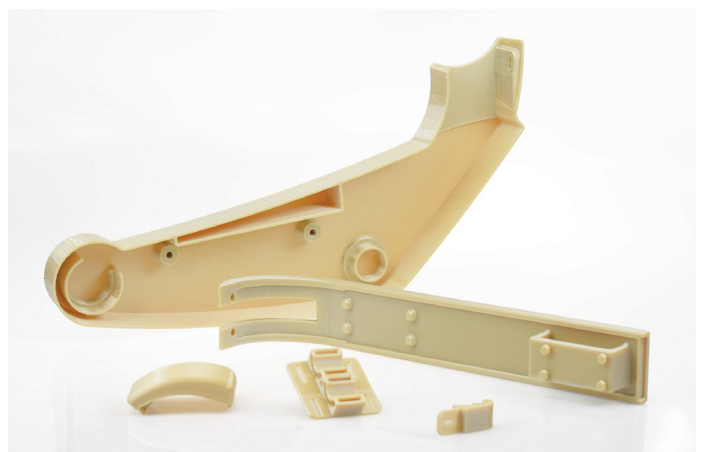### Aircraft Interiors Solution Machine Readiness Package

- The AIS Machine Readiness Package includes documentation that can be used as a basis for material and process specifications needed for aircraft qualification programs. The documentation includes a sample process specification, Process Control Document (PCD) and Material Specification. The Process Control Document includes a step-by-step guide to check that the printer conforms with the process requirements. The AIS package also includes a toolkit with all the tools needed to execute the procedures in the PCD. A list of recommended material control equipment is also provided. The package includes on-site training for the documentation and the use of the toolkit and auxiliary equipment.

Process Guidance

- This product includes on-site support and an equivalency toolkit to calibrate and validate the Fortus 900mc operation. A Process Control Document provides the requirements to perform this procedure.

Documentation

- Documentation includes a Material Specification governing the production of certified-grade ULTEM™ 9085 CG resin filament and a Process Specification for using the material to build parts on the Fortus 900mc.

- The Design Allowables Dataset documents the material properties of ULTEM™ 9085 CG resin when 3D printed with the Fortus 900mc.

Aerospace Interiors
Solution Components

Aerospace Interiors Solutions Components		
AIS Machine Readiness Package	**ULTEM™ 9085 CG Resin**	**Fortus 900mc**
Documentation	FST (flame, smoke, toxicity) compliant	Large volume
Toolkit	Traceability	High throughput
PCD Training (including auxiliary equipment)	High performance	Reliable, closed system
		MTConnect ready