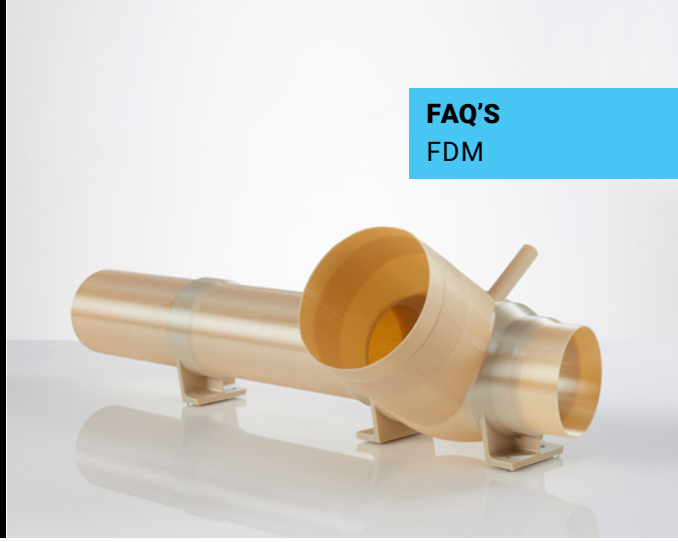
stratasys

FAQ'S
FDM



Frequently Asked Questions

ULTEM™ 9085 Resin

1. What is ULTEM™ 9085 resin?

ULTEM™ 9085 resin is a thermoplastic developed primarily for the aerospace industry and also has applications in the automotive and military industries. ULTEM™ 9085 resin is a strong, lightweight, flame-retardant thermoplastic widely used in aircraft interiors. The material achieves a UL-V0 flammability rating and meets FAR 25.853 FST requirements for use in various aerospace applications. ULTEM™ 9085 resin is certified for use on commercial aircrafts, which will allow manufacturers to bypass a lengthy certification process. The material is an ideal candidate for functional prototyping, concept modeling, manufacturing tooling aids, and production parts.

2. Why is the material called ULTEM™ 9085 resin?

ULTEM™ 9085 resin is a thermoplastic resin manufactured by SABIC Innovative Plastics. As you know, with all the other FDM® thermoplastics, the resin manufacturer's names and resin formulations are highly confidential.

Stratasys has intentionally kept ULTEM™ 9085 resin as the product name and will disclose SABIC as the thermoplastic resin manufacturer in an effort to allow our FDM customers and prospects to capitalize on the material certifications already in place for ULTEM™ 9085 resin (primarily in the Aerospace industry). Bypassing these certifications can cut years and tens of thousands of dollars from the approval/certification processes for various applications. As a result, this should greatly remove barriers and accelerate the sales cycle in applications requiring certifications.

3. Who is the target market for ULTEM™ 9085 resin?

The aerospace market is the primary target for this new material. In addition, there are additional markets such as the automotive and military industries.

4. What are the unique properties of ULTEM™ 9085 resin?

Its strength-to-weight ratio, flammability characteristics including UL-V0 equivalency, FAR 25.853 FST compliance for aerospace applications, and high heat deflection temperature (350 °F / 177 °C) set ULTEM™ 9085 resin apart from any other thermoplastic currently available on Stratasys FDM systems. These unique properties compliment the already diverse family of thermoplastics available on Stratasys FDM systems and are expected to open new applications in the aerospace, automotive, and military industries.

ULTEM™ 9085 Resin

5. What FDM systems is ULTEM™ 9085 resin available on?

ULTEM™ 9085 resin is available on the Fortus 450mc and F900. System and tip/slice configurations are listed below.

System	Model Tip	Support Tip
Fortus 450mc™	T16 (10 slice)	T16 (all slices)
	T16A (10 slice)	
	T20 (13 slice)	
F900™	T16 (10 slice)	T16 (all slices)
	T16A (10 slice)	
	T20 (13 slice)	

6. What is the difference between the T16 and T16A tips?

The T16A tip is a redesigned tip that reduces the instances of build defects and has increased mechanical strength compared to the T16 tip. For example, the ZX tensile strength at break for the T16A tip is roughly 10% greater than the T16 tip on the F900.

7. What support material does ULTEM™ 9085 resin work with?

ULTEM™ 9085 resin has its own unique breakaway support material SUP8500B™.

8. What colors does ULTEM™ 9085 resin come in?

ULTEM™ 9085 resin is now available in six colors as Stratasys Validated Materials which are Dream Gray, Aircraft Gray, Gunship Gray, Jana White, 7362 White, and Red. If you would like to purchase any of these colors or have any questions, please reach out to your local reseller.

9. What is ULTEM™ 9085 resin CG?

ULTEM™ 9085 resin CG adds onto the high performance of the ULTEM™ resin thermoplastic with the ability to meet the extensive, more stringent test criteria and material traceability required by aerospace industries and regulatory agencies. ULTEM™ 9085 resin CG leverages hardware and software changes, coupled with enhanced process controls that result in optimal part characteristics, low production variability, and higher yield. Each shipment of ULTEM™ 9085 resin CG comes with two forms of Certificate of Analysis (CoA). A raw material CoA shows injection molded mechanical properties and FAR 25.853 compliance of the raw resin, and a filament CoA shows the filament properties of the material after production.