



FDM[®] HIPS

Part Numbers

Filament Canisters	
355-70000	HIPS, 92 cu. in. – Fortus Plus
355-70080	SUP1500B, 92 cu. in. – Fortus Plus
Printer Consumables	
511-10401	T16 tip
511-10301	T12 tip
325-00100	Low temperature build sheet, 0.02 x 16 x 18.5 in. (0.51 x 406 x 470 mm)
325-00300	Low Temperature build sheet, 0.02 x 26 x 38 in. (0.51 x 660 x 965 mm)

Printer is a Fortus 450mc[™] or F900[®] with hardened components.

Description of FDM HIPS

FDM HIPS (high-impact polystyrene) is a low-cost, general-use 3D printing thermoplastic. It offers similarities to ABS but has high impact resistance, making it suitable for printing lower-requirement jigs, fixtures and prototypes at a reduced cost.

Key Attributes

- Low cost
- General use
- High impact resistance
- Used with SUP1500B[™] breakaway support which is easy to remove
- Slices: 10

Primary Application

- Low-requirement jigs, fixtures, manufacturing aids, and functional prototypes

Challenges Customers Have With Current Solutions

- Lead time
- Inability to quickly iterate through multiple prototypes

Benefits of FDM HIPS

- Cost-effective alternative to other materials
- Quick removal of breakaway support

Printing Challenges and Tips

FDM HIPS is a Stratasys Validated Material. Validated materials are developed by Stratasys or a third-party provider, meet Stratasys quality standards, and have received basic reliability testing for use with Stratasys FDM printers. They also undergo a less extensive tuning and testing process than a Stratasys Preferred Material. More extensive tuning would help compensate for difficult printing geometries or conditions. To better prepare the user for what the build experience may include, this section outlines tips and known difficulties with this material.

- Use sparse supports.
- The support-to-model interface is not as smooth as a preferred material. This can be particularly apparent on elevated bottom surfaces.
- Color variation may be observed between different lots of FDM HIPS material spools.
- The material has a lighter build sheet adhesion, particularly if the build sheet is reused multiple times. If the user is experiencing poor build sheet adhesion on the Fortus 450mc, particularly on a tall, slender part, a custom group can be applied to the first two layers using Insight[™] software. The custom group should be Support material, with aligned rasters, and an Adjacent raster air gap of 0.0350.
- The model tip life is set to 1100 in³. For a validated material, the tip life was tested to 185 in³ and from prior experience with similar materials, the tip is anticipated, but not guaranteed, to print well until the tip life is reached.
- Build times of validated materials may vary from software-provided estimates.

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