

# FDM SAMPLE PART



## Wood Grain Finishing PhotoGenesis Process

System: Maxum T12

Slice: 0.0007 inch (0.178 mm)

Build Time: 12 hours



## PhotoGenesis for FDM Model Material Wood Grain Finishing Technique

This treatment, applied to an FDM ABS model, uses a water-based dip coating to give models a wide variety of decorative finishes, ranging from wood grains to high-tech geometric patterns. These finishes are visually appealing, wear-resistant, and are similar to finishes currently used in many automotive interiors.

### Process

1. A design is printed onto a thin, water-soluble plastic film.
2. An opaque base coat is applied to the model to provide an appropriate background color.
3. The film is then floated in a water bath and the finished part is dipped into it, transferring the design to the model.
4. The film residue is then washed off, but the design stays on the part.
5. The model is then dried and a clear protective topcoat is applied.

### Benefits

Since the plastic film is very thin, it can conform to nearly any geometry. The finish can be applied to only specific areas of a model by masking off the remaining areas. Since the film is washed off of the part and only the ink remains, the only additional thickness added to the part is the topcoat, which is typically only ~ .010" thick. The clear topcoat not only gives the part a visually appealing glossy finish, but also provides a functional, durable model.

Technique provided by American Stitches, 888-403-3403. [www.amerian-stiches.com](http://www.amerian-stiches.com)



## Leather Wrapping Process

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Build Time: 12 Hours



## Leather Wrapping Process

An FDM ABS model, was covered with a piece of custom cut, automotive-grade leather and hand-stitched. This technique is very attractive and is used in many automotive interiors today like steering wheels and gear shift knobs.

### Process

1. A pattern is custom designed to fit the part. This may consist of multiple pieces, depending on the geometry of the model.
2. The leather is then cut to size, either by hand (low volume) or by machine (high volume), according to the pattern.
3. The model is coated with adhesive and the leather is applied.
4. Seams and / or mating pieces are sewn together.

### Benefits

This covering adds a very high-end, luxurious look and feel to models. There are approximately 250 leather colors and grains available and padding can also be added under the leather for a softer feel. Since the leather is generally about 1/32" thick, it will cover most minor surface imperfections in the model. This greatly reduces the amount of finishing needed. The leather wrapping can also be combined with other processes, such as PhotoGenesis, to produce a two-tone model.

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