Overview

MED610™ is a clear, general purpose material that simulates standard plastics, and is suitable for prolonged skin contact (more than 30 days) and short-term mucosal-membrane contact (up to 24 hours).

Before printing MED610 parts, make sure that you read the detailed instructions in MED610 Bio-compatibility Requirements, available on the Stratasys website.

A. This document describes recommendations and tips for achieving optimum clarity for bio-compatible MED610 parts.
B. Printing mode and surface finish
C. Part thickness
D. Changes over time

Printing Recommendations and Tips

A. Printing Preferences

Prolonged exposure to UV radiation during printing produces parts with a yellowish tint. For this reason, the printing mode and surface finish you choose affect the clarity of MED610 parts.

High Speed mode (if applicable)

In High Speed mode, fewer print-head and UV lamp passes (along the x-axis) are needed to complete the part. This reduces the exposure of the part to UV radiation, which improves clarity.

Matte finish

When printing MED610 parts, always prefer a matte surface finish to achieve maximum clarity. The support material that covers matte surfaces helps protect the part’s layers from excessive UV radiation, thereby improving clarity.

Printing parts with a glossy surface finish

When printing glossy parts, arrange them so they have similar heights. This ensures that the parts are not exposed to unnecessary UV radiation, since parts with similar heights require the same number of print-head and UV-lamp passes. When printing parts with different heights on the same tray, the print block passes over all parts even after the shorter parts have been completed. This causes the shorter parts to absorb more UV radiation than necessary, which reduces clarity.

B. Part Thickness

Parts that are less than 15-millimeters thick offer the best clarity and color. Parts that are thicker than 15 millimeters may have a tint.
C. Changes Over Time

The clarity of MED610 parts improves considerably over time. Several days after printing, the tint fades and clarity increases.

To quickly improve the clarity of bulky parts, place them in an oven, at 50˚C (122˚F), for four hours.

When planning testing, consider this “aging” factor.

Figure 4: Parts printed with different materials and surface finish