SLA 3D modeling rules

Walls



Best practice: 0.6 mm thickness or higher Minimal: 0.4 mm thickness

Pins



Recommended: 0.3 mm (7 mm tall) to 1.5 mm (30 mm tall)

Holes



Best practice: 0.5 mm diameter holes

Walls of different thickness exert different forces on the resin, which can result in warping. Long, thin models also tend to warp during curing. This can usually be avoided with consistent wall thickness and orientation.

Bridging



Recommended: 21 mm (5 mm width × 3 mm thick) Tolerance

Warping



If two parts need to fit together loosely use a tolerance of 0.2 on every side of the model. Minimal: 0.125 mm tolerance

Blowout



When the part is lowered into the resin, air can get trapped in cup-like shapes. This can cause a blowout where the side of your part essentially explodes outwards. To avoid this, create a blowout hole on top of 3.5 mm.

Cupping & Hollowing



Some models have empty spaces facing up, which traps liquid resin in these voids. If changing the orientation can't avoid this issue, add draining holes of minimally 3.5 mm for excess resin to pour out of the model.



Volume



Large solid areas should be hollowed where possible. This will also save money, as less material will be needed to print your design.