

## Minimum Wall Thickness Awareness

Posted by Marco CM - 2013/12/04 13:23

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When modeling or choosing a 3d model for 3d printing you must consider Wall Thickness. Each 3d printing material has it's own respective limitation with respect to minimum wall thickness and feature details. Many 3d printing technologies including SLS, SLA, FDM, and Polyjet are fully capable of producing extremely thin walls or structures far below 1 millimeter. However walls, large expanses and features of a model this thin are typically not structure or durable and easily break during post processing or shipping and handling.

(Image below shows parts with extremely thin walls. This model was only 3d printable in Nano Amber Resin, Nano Photosilver, and Nano High Temp materials which have a minimum wall thickness of 0.5mm.)

[http://kraftwurx.com/images/fbfiles/images/Kraftwurx\\_Order\\_463\\_to\\_thin.jpg](http://kraftwurx.com/images/fbfiles/images/Kraftwurx_Order_463_to_thin.jpg)

(Image below highlights a section that is printable but will likely break during post processing or shipping and handling.)

[http://kraftwurx.com/images/fbfiles/images/KW\\_Order\\_IanHawkins.jpg](http://kraftwurx.com/images/fbfiles/images/KW_Order_IanHawkins.jpg)

Kraftwurx.com recommends minimum wall thicknesses for each 3d printing material offered. The minimum wall thickness for most materials is 1.5 millimeters or 0.059 inches. Below is a list of the most popular materials and their minimum wall thicknesses allowed.

Materials:                      Min Wall Thickness:

Nano Crystal.....	0.8mm
Nano Amber Resin.....	0.5mm
Casting Plastic.....	0.8mm
Casting Wax Turquoise....	0.5mm
ABS Industrial Plastic...	1.5mm
10k Yellow Gold.....	0.5mm
Sterling Silver.....	0.5mm
Classical Bronze.....	3.0mm
Damascus Steel.....	3.0mm
Water Clear SLA Plastic..	2.0mm
Muti-Color Sandstone.....	1.5mm
Polyamide White.....	2.0mm

This information and more can also be found on the materials page here:

<http://www.kraftwurx.com/create/create-seperator/materials>

-Marco CM

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