

## Modeling Sterling Silver Parts and Jewelry

Posted by Marco CM - 2013/12/23 13:41

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Modeling for precious metals such as silver, gold or platinum is very easy. Below you will find 5 basic guidelines to follow when crafting precious metal items at Kraftwurx.com

These guidelines may also be applied to the crafting of 3d models for 3d printing in Casting Wax material as well. (Casting Wax is pure organic wax, the surface is smooth, semi-soft and parts are fragile.)

1. Watertight, Solid: This means the mesh cannot have any missing polygons or holes in the geometry. (duplicate polys and verts should also be avoided). I recommend using a free to download software tool called "Netfabb Basic" to check models before sending them off for 3d printing.  
[http://kraftwurx.com/images/fbfiles/images/IMG\\_27062013\\_154709.png](http://kraftwurx.com/images/fbfiles/images/IMG_27062013_154709.png) (model with fully open mesh pictured)

2. Wall thickness: When modeling for precious metals you may create walls as thin as 0.5 mm. However realize the models will be 3d printed in casting wax first before casting into metal. Therefore large expanses or supporting walls/members should be thicker than 0.5 mm to ensure the part is not too fragile in the wax stage. Once cast to metal even the thinnest sections will be strong.  
[http://kraftwurx.com/images/fbfiles/images/Kraftwurx\\_Order\\_463\\_to\\_thin-20131223.jpg](http://kraftwurx.com/images/fbfiles/images/Kraftwurx_Order_463_to_thin-20131223.jpg) (model with multiple thin walls/regions pictured)

3. Details and edges: The Casting Wax material Kraftwurx 3d prints for precious metal castings are capable of extremely high resolution details (0.01mm). 3D voxel printing at a DPI Resolution of: 5000 x 5000 x 8000 (xyz) and a Print Layer Height of: 0.01mm. Casting Wax 3d prints have crisp, sharp edges on text and features. Very sharp details and pointy tips can become dulled with standard casting/polishing processes depending on the unique shape of your model.  
[http://kraftwurx.com/images/fbfiles/images/Nano\\_WaxBlue\\_Par2\\_web-20131223.jpg](http://kraftwurx.com/images/fbfiles/images/Nano_WaxBlue_Par2_web-20131223.jpg)  
(Casting Wax 3d printed part pictured)

4. Polishing, Matt Finish and Details: When designing your pieces consider how they maybe polished or matte finished. Some heavily occluded or recessed areas cannot be polished and will remain semi-dull or unpolished depending on how hidden the space on the object is. All metal parts including precious metals ordered on Kraftwurx.com are tumble polished by default and will render beautifully polished, shiny parts. The option to add a "High Polish" finish to your precious metal parts is available. Applying High Polish to your model will additional manual polishing in order to achieve a high glossy surface finish. "Matt" finish is the final option for precious metals finishes. Matt finish is applied via sandblasting to evenly dull the surface of the model to a satin surface appearance. At this point you may also consider how antiquing may appear if you plan to add that to the final piece after casting. Antiquing is the process of using a black wash, dye or substance to patina or darken the groves and recessed areas of jewelry. This effect helps to highlight and draw attention to fine details on your model.  
[http://kraftwurx.com/images/fbfiles/images/Bonfire\\_pendant\\_00web.jpg](http://kraftwurx.com/images/fbfiles/images/Bonfire_pendant_00web.jpg)  
(Sterling Silver pendant with High Polish finish applied pictured.)

5. Size, Weight and Wear-ability: Try to imagine your model in the real world. Consider how your design maybe worn and in what conditions it maybe used. Is it comfortable, or possibly too heavy? Could the

wearer accidentally poke or harm themselves with it? Could it slip off unexpectedly when moving and gesturing? MultiColor Sandstone 3d printing material is an ideal, affordable prototyping material to use when testing these and other aspects of your design. 3d printing prototypes in plastic or MultiColor Sandstone can provide you with an accurate feel for the size and shape of your model. Once you are happy with the design you can then move forward with ordering a 3d printed Casting Wax or precious metal piece.

[http://kraftwurx.com/images/fbfiles/images/\\_MG\\_1153web.jpg](http://kraftwurx.com/images/fbfiles/images/_MG_1153web.jpg)

(Resin prototype bracelet pictured)

These guidelines should be get you up and running on the road to precious metal crafting! Feel free to post questions comments etc. Below enjoy photos of previous precious metal orders produced at Kraftwurx.com.

[http://kraftwurx.com/images/fbfiles/images/MellisaRing2\\_web.jpg](http://kraftwurx.com/images/fbfiles/images/MellisaRing2_web.jpg)

[http://kraftwurx.com/images/fbfiles/images/Sterling\\_Silver\\_GearRing\\_01\\_web.jpg](http://kraftwurx.com/images/fbfiles/images/Sterling_Silver_GearRing_01_web.jpg)

<http://kraftwurx.com/images/fbfiles/images/silvernobweb.jpg>

Community Manager Kraftwurx.com

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