
Subject: wall thickness

Posted by [__DF__](#) on Tue, 09 Feb 2010 11:34:54 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hello Shapeways,

Recently, two of my models have been rejected due to wall thickness issues.

Below are the screenshots received by Shapeways showing this issue:

Steiner model

Trefoil model

I did a measuring myself to another model of mine, which has been successfully printed by shapeways and now I have it here, in my house. I am talking about my Holes model, located in the following shapeways url:

<http://www.shapeways.com/model/68363/holes.html>

Bellow you can see my measuring:

I realized that the above model has exactly the same problems with my rejected models (the ones in question), however, it has been successfully printed by Shapeways and it looks great! Really great! Bellow is a screenshot of the printed model (sorry about the bad photo):

I also noticed, that Shapeways is using netfabb for measuring. netfabb only uses mm as a measuring unit. Bellow you can see the same model measured in netfabb and maya:

netfabb measure

maya measure.

As you can see at the last 2 screenshots, numbers are almost the same. The only difference is that maya units are set to cm. That means, that a distance of "0,34mm" in netfabb, is actually 0,34cm in real, since maya measures in cm and the model has been totally designed in maya.

However, some of my models are already rejected due to this kind of measuring. Any help on this will be welcome.

Subject: Re: wall thickness

Posted by [EricFinley](#) on Tue, 09 Feb 2010 22:12:14 GMT

[View Forum Message](#) <> [Reply to Message](#)

I assume they're measuring them on the same scale they'll be printing them - so it may be that there's an operator error there, on their end or on yours, in the units discrepancy. Try rescaling it on the assumption that what they're receiving is in cm, and resubmit it; assuming it passes their checks, you should be able to tell by the overall model dimensions whether the scaling is correct.

Moreover, as they've explained to us here before, yes - things smaller than the limit can, sometimes, print. Maybe even often. But they can also sometimes screw up not just your print, but those of other customers as well - presumably through your misprinted bits ending up in the recycled portion of the powder. (If they didn't recycle powder I'm guessing their prices would jump by at least 4x.) So it does no good to hold up a previous successful model as "proof."

May I humbly suggest that you look just a little ways down in this very forum, install Blender, and use my script to check your wall thicknesses that way? You can import into Blender from a variety of formats, pretty much anything Shapeways accepts, although personally I would recommend against using .dae format; Blender 2.4.9's Collada importer is rather flaky.

Subject: Re: wall thickness

Posted by [__DF__](#) on Wed, 10 Feb 2010 12:14:58 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thank you for your reply Eric.

Shapeways is the best place to print, we all know that I suppose. It is actually what I was always looking for.

However, I am still a bit complicated with the wall thickness issues... I also know the the biggest part is my mistake, due to my effort to make my model thin enough to print, and cheap at the same time as well....

I tried your script, but I am getting the following error:

"Python script error: check console"

I am on a mac, also, hardly know how to use blender...

Does your script works on a mac or it is windows only? Does it works with the latest blender version (Blender 2.49b)?

Subject: Re: wall thickness

Posted by [EricFinley](#) on Thu, 25 Feb 2010 18:07:11 GMT

[View Forum Message](#) <> [Reply to Message](#)

There are two things with Blender on a Mac that could be causing you problems.

The first one is that my script is written for Python 2.6.4, which is what the Windows binary of Blender 2.49b wants to see. However, it appears that the commonly available Mac binary of Blender 2.49b (the one currently up at Blender.org) uses Python 2.5. There is exactly one command which I've used extensively which is not present in 2.5. If you go to this post you'll see a link to a version of the script with that operation replaced by its (now deprecated) Python 2.5 equivalent. Try that.

The other possibility is that you don't have Python set up on your system at all. When you install Blender, it includes a "mini-Python" install which allows you to run Blender itself, but not to run scripts. So it may be that you need to download and install the proper version of Python first. (To find out which version, locate your Mac console - I'm not a Mac user, but a little Googling and/or poking around in your Applications folder should find it - and look at the messages that come up when Blender is started. Those will tell you (a) whether it's finding it properly, and (b) which version it's looking for, which is the version you should download if it says it can't find it.

If those don't help, then find your console as above, run Blender and try running the script, and then PM me with the details that come up on your console. I should be able to figure out what's up from that data.

Cheers!
