Subject: Wallthickness Issues
Posted by 3dworks on Thu, 05 Jul 2012 11:14:17 GMT
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Hi

I use geomagic software to add wallthickness (2mm) to my models. When i calculate the volume in geomagic everything seems right. However when the model (*.stl) is uploaded to shapeways website it is calculated as a solid model.

The model doesnt have any intersections, spikes or other errors.

This happened with me on several occasions.

Please advice.

edit: ive also calculated the volume in meshlab. And there WT also is also properly applied.

Subject: Re: Wallthickness Issues
Posted by Youknowwho4eva on Thu, 05 Jul 2012 13:09:57 GMT
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You must have a hole going from the inside to the outside. Shapeways software automatically deletes internal geometry not connected to the outside.

Subject: Re: Wallthickness Issues
Posted by stop4stuff on Thu, 05 Jul 2012 16:42:39 GMT
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Use NetFabb Studio Basic (its free) for measuring, error checking and repairing models. Load in model, volume and surface area is shown, select the measuring tool and you can measure whatever you like. However, loke Mike says. you will need to have an opening joining the inner and outer shells otherwise Shapeways software cannot find the inside shell and will treat the model as solid.

Subject: Re: Wallthickness Issues
Posted by Fredd on Wed, 11 Jul 2012 23:22:31 GMT
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Basically, Shapeways acts like a surface modeller. Needs well defined surfaces.
You upload a model of a sphere for example, with all its normals pointed outward. The printer detects the outer surface, with a defined interior,and surface, prints it as a solid.
You create a sphere, with a 2mm wall, Shapeways sees only the outer surface again, not the interior walls, prints another solid.
The hole, which really needs to be described as a tunnel, allows SW to detect the interior faces of the objects interior wall you created, as well as the surface. So now you you get the sphere with less volume printed.
A interesting fact, if you take a mesh, duplicate it, reverse the directions its face normals are facing, scale it inward, then join both meshes, you have created a interior wall. You still need a tunnel connecting the outer and inner faces for SW to recognize the inner surface