Subject: Solidworks and shelling a model
Posted by AVSdesign on Sun, 01 Jul 2012 20:50:09 GMT
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I've been experimenting to see how the price of a model differs if it is solid or hollow, but I've hit a snag.

It seems there is another step necessary when shelling out a model in Solidworks for 3d printing because of the models I've uploaded (a simple cube, in a 1cm and one inch size) both prices were the same.

However, on another model I extrude/cut a hole in the base of the 1in cube(with a 1cm wall thickness) and then closed that hole with an extruded wall to create a 1in cube with a 1cm wall thickness. This worked!

Any thoughts?

Subject: Re: Solidworks and shelling a model
Posted by JACANT on Sun, 01 Jul 2012 21:16:11 GMT
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When you upload a model be sure to pick whatever 'unit of measure' you created the file in. Also try to create in mm. Just convert 1" = 25.4mm. Dont try to shell using a different unit. It would be pointless to have a wall thickness of 1cm. That is 10mm or just over 3/8". To work properly keep the shell to the minimum wall thickness required by the material, then upload this. Don't forget you will need a 'hole' from the inside to the outside of your model. Otherwise Shapeways will delete the inside wall and treat it as a solid model.

Subject: Re: Solidworks and shelling a model
Posted by AVSdesign on Sun, 01 Jul 2012 21:45:32 GMT
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I have been modeling in cm, but switching to mm woulnt be an issue. I only made the 2nd cube an inch as a basis for comparison, but the model unit measurements remain in metric.
The wall thickness was chosen with little thought, and I would alter that just as you said to match the selected materials minimum wall thickness.
It would make sense that in my first two attempts, that the cavity was deleted as you mentioned.
The last model, the successful one may just be a fluke.
I'll just have to keep experimenting

Subject: Re: Solidworks and shelling a model
Posted by JACANT on Sun, 01 Jul 2012 21:57:30 GMT
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The 'hole' you have to make from inside to outside serves two purposes, one to make sure the software Shapeways uses recognises it as a hollow object and two to let the excess powder out. There are guidlines for this in the materials design rules.

Subject: Re: Solidworks and shelling a model
Posted by AVSdesign on Sun, 01 Jul 2012 21:59:59 GMT
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Makes sense, thank you