Subject: Tube Minimum walls & Boolean subtract?
Posted by Mechanical on Fri, 08 Feb 2013 21:00:41 GMT
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Hi everyone,

I just received my first 3d printed model and there are some issues which i could use some help with.

I have 2 questions -

How do i get Shapeways to recognize hollow areas - it seems as though they were ignored completely and filled solid with print material.
In 3DSMAX i created the hollow using a Boolean subtraction rather than Shell, was this a mistake?

Also, has anyone attempted to create small tubes using FUD and what are the smallest tubes physically possible? I need tubes that are as small as FUD will allow and they need to be functional -they will transport liquid within them. The tubes from the model i received today were fused solid, although it seems the 3d printer did at least make an attempt at them .

Thanks in advance folks,
Paul.

Subject: Re: Tube Minimum walls & Boolean subtract?
Posted by Youknowwho4eva on Fri, 08 Feb 2013 21:05:11 GMT
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Hollow areas need to be attached to the outside. Internal geometry that doesn't have a connection to the outside faces are automatically deleted.

For your FUD tubes, it's probably the support material inside them. Try soaking it in nail varnish remover for 10-15 minutes. May take a couple tries to get it all out.

Subject: Re: Tube Minimum walls & Boolean subtract?
Posted by Mechanical on Fri, 08 Feb 2013 21:18:27 GMT
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Cool, so do you have any idea how i connect hollow areas to outside faces in 3dsmax? Do i

reverse the normals?

To be honest i think the tubes were kinda my fault, i tried to make them .5 mm ID and 1mm OD, oops . I'm just wondering if anyone has done anything similar. At least i learned that .5mm ID is too small for transparent detail.

Thanks for the answers.

Subject: Re: Tube Minimum walls & Boolean subtract?
Posted by Youknowwho4eva on Fri, 08 Feb 2013 21:26:57 GMT
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You need to make an actual hole in the model. If you want the support material to be able to come out you have to meet the minimum escape hole size listed for the material. So it's an actual hole in the model

Transparent detail and FUD are two different things. The minimum clearance for FUD is .05mm I haven't made tubes in FUD myself, but that suggests the sizes you used would work, as long as you can clean out the support material. If you used transparent detail, the minimum clearance is 2mm.

Subject: Re: Tube Minimum walls & Boolean subtract?
Posted by GWMT on Mon, 11 Feb 2013 05:46:57 GMT
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I've printed straight FUD tubes 0.3mm inside diameter and found they almost always have to be cleaned out with a drill or reamer to get rid of all of the support material. 0.9mm tubes don't need cleaning so maybe 0.5mm-0.6mm might be the limit for 'no cleaning required'.

Subject: Re: Tube Minimum walls & Boolean subtract?
Posted by Mechanical on Mon, 11 Feb 2013 13:13:22 GMT
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@ GWMT,

That's great thanks, i have a model ordered that has .6mm ID tubes, hopefully it turns out ok and i'll let you know the results for other peoples future reference, thanks again,
Paul.