Subject: Will this print?

Posted by opresco on Thu, 12 Jul 2012 00:16:21 GMT

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Ceramics Sake Spring Cup (Espresso, Cappuccino, Ouzo) http://shpws.me/aoDU

" The only way to discover the limits of the possible is to go beyond them into the impossible. " Arthur C. Clarke

Follow me on Twitter https://twitter.com/OvidiuOpresco

File Attachments

1) SpiralCup_01.jpg, downloaded 729 times

Subject: Re: Will this print?

Posted by stonysmith on Thu, 12 Jul 2012 03:15:54 GMT

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What are the dimensions? If the springs were to be straightened out.. how long are they, and how big around are they?

I would estimate that this would have troubles when being fired. What you might do is add a center post that would support the weight of the cup while it's in the kiln.

Subject: Re: Will this print?

Posted by Youknowwho4eva on Thu, 12 Jul 2012 13:21:20 GMT

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For ceramics, I've heard it's good to think about if it were made of wet sand, would it stand. That's probably a little over strict of thinking for some aspects, but I think it is a good analogy for your spiral base. I feel it would at least compress during the process, and probably lean. It would take away from the spiral, but add strength if you reversed the rotation of one of the spirals.

Subject: Re: Will this print?

Posted by opresco on Thu, 12 Jul 2012 13:22:46 GMT

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Springs: 5mm

Cup wall thickness: 4mm

File Attachments

1) Spring&CupThickness.jpg, downloaded 686 times

Subject: Re: Will this print?

Posted by opresco on Thu, 12 Jul 2012 14:20:40 GMT

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If I went by the sand rules and what others said, I' would never have proved them wrong

http://www.shapeways.com/forum/index.php?t=msg&th=10075& amp; amp;start=0&

Subject: Re: Will this print?

Posted by Youknowwho4eva on Thu, 12 Jul 2012 14:23:32 GMT

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Like I said, it may be a little too strict of thinking. Probably more of a wet clay analogy.

Subject: Re: Will this print?

Posted by opresco on Mon, 16 Jul 2012 14:54:00 GMT

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I think I have a solution!

And it could work with lots of other, otherwise non-printable,

designs in Ceramics – that seem to have the same problem.

Supose I upload the edited STL file (see below) including, in a ZIP,

File Attachments

1) BreakCentralSupportBeforeGlazing.jpg, downloaded 600 times

Subject: Re: Will this print?

Posted by opresco on Mon, 16 Jul 2012 14:57:54 GMT

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Thanks! But that will make me depart from my design. Please see my last response to Youknowwho4eva.

Subject: Re: Will this print?

Posted by Youknowwho4eva on Mon, 16 Jul 2012 15:01:00 GMT

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It wouldn't hurt to ask, you can email service to find out. My guess would be no on the break away stand. Have you tried to order it as is?

Subject: Re: Will this print?

Posted by bluelinegecko on Tue, 17 Jul 2012 13:39:38 GMT

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I like the design. I would think that they could fire the cup upside down initially, so that the springs wouldn't have to support the weight of the cup. That should solve the issue as the springs probably wouldn't compress much under their own weight. Then shapeways could fire it with the springs on bottom when they glaze it. I'd give it a shot as is if I were you.

Subject: Re: Will this print?

Posted by opresco on Tue, 17 Jul 2012 17:52:17 GMT

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That's very smart. Thanks! But, will they do it this way?

My gut feeling is that the springs can support the cup (is quite thin!) in the green stage.

I am going to order it soon; I'll keep everybody posted with the results.

Subject: Re: Will this print?

Posted by opresco on Wed, 25 Jul 2012 12:42:23 GMT

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I just ordered a print.

I'll keep everybody posted with the results.

Thanks.

Subject: Re: Will this print?

Posted by CityGenerator on Thu, 16 Aug 2012 09:52:43 GMT

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I see that you just ordered a print. Still, I was thinking what if you just flipped the vertical axis and had it printed upside down?

Subject: Re: Will this print?

Posted by opresco on Thu, 16 Aug 2012 12:48:10 GMT

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Yes. I did.

And the answer was:

"For your reference, the following models have been rejected by our production team:

- Sake Spring Cup #1 in Glazed Ceramics: Can not be printed
- : spiral will not support cup and will slump during firing "

I liked your idea of turning the model upside down, but I don't like too much playing Russian roulette with my money.

Suppose I do what you've suggested, then they don't bother to turn it upside down before glazing

It would be very nice if Shapeways would provide for a Designer's Note in the upload window.

On August 9, I used the coupon to order

"Drink to Your DNA!" - Espresso & Sake Tower Cup â€" that seemingly could have the same "slumping" problem.

http://shpws.me/aMwe

On August 14, a customer bought the same model from my shop. Since, in this instance, "no news" is "good news", I still keep my fingers crossed

Thanks again for your excellent advice.

File Attachments

1) ~DNASpiralCup3B_01.JPG, downloaded 392 times

Subject: Re: Will this print?

Posted by opresco on Thu, 16 Aug 2012 14:27:39 GMT

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Re; The rejected model

I just e-mailed The Shapeways Service Team:

Hi Ralph, Maartje, Kevin, Christel, Joost, Michon, Mitchell and Gary,

Please see my post "Will this print?" in the forums

http://www.shapeways.com/forum/index.php?t=msg&th=10169& amp; amp; amp; amp; amp:start=0&

It generated guite a lot of interest from your readers.

I would very much love to have this printed.

Please see 2 proposed solutions, and let me know if feasible.

1. Proposed by opresco (see self-explanatory images in one of my forum replies):

I think I have a solution!

And it could work with lots of other, otherwise non-printable, designs in Ceramics â€" that seem to have the same problem. Suppose I upload the edited STL file (see below) including, in a ZIP, a ReadMe file and the image below – will Shapeways do it?

2. Cleverly proposed by bluelinegecko

"I would think that they could fire the cup upside down initially, so that the springs wouldn't have to support the weight of the cup. That should solve the issue as the springs probably wouldn't compress much under their own weight. Then shapeways could fire it with the springs on bottom when they glaze it. I'd give it a shot as is if I were you."

Thanks, Ovidiu

P.S. And, as I mentioned in one of my replies, I think it would be very helpful if Shapeways would provide for a "Designer's Note to the Production Team" in the Model Upload window.

Subject: Re: Will this print?

Posted by opresco on Fri, 17 Aug 2012 17:48:47 GMT

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Good news!

I've just received this message from Service:

Gary Kenney

AUG 17, 2012 | 07:15PM CEST

Hey Ovidiu.

I spoke to my supply chain colleague that works with our ceramics manufacturer.

Your proposed solution of the break-off central support isn't unthinkable and could possibly work. So while I can't guarantee that it will work, the only way to know for certain would be to go ahead and place an order for the model.

This way it can go through all the necessary checks for printability.

Regards,

Gary

Gary Kenney

Customer Service Agent

Subject: Re: Will this print?

Posted by opresco on Fri, 17 Aug 2012 19:14:33 GMT

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Just placed the order for the revised model incorporating the "break-off before glazing central support".

"order will be shipped on or before September 5th "

Ceramics Sake Spring Cup http://shpws.me/aoDU

File Attachments

1) BreakCentralSupportBeforeGlazing.jpg, downloaded 325 times

Subject: Re: Will this print?

Posted by opresco on Wed, 05 Sep 2012 15:31:28 GMT

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Bad News:	
"Hi Ovidiu.	

We're really sorry to let you know that there was a problem with your recent order. These design(s) could not be 3D printed in the material selected:

Sake Spring Cup #1 in Glazed Ceramics

Reason: Can not be printed

Additional information: This piece will not print, the center "leg" is tapered at the attachment point

Please take a look at the attached images for further explanation. We've highlighted a few areas that will cause issues when printing.

Given the nature of 3D printing (converting digital files into physical products), every now and then

we catch designs that will be too fragile to create in certain materials. Though we do our best to defy the laws of physics and try to find these issues as early as possible, some are only found during the manufacturing process.

Sorry for the inconvenience.

Your continued satisfaction is our top priority, so if there's anything else we can do to help, please let us know!

Kind regards,

The Shapeways Service Team

Ralph, Maartje, Kevin, Christel, Joost, Michon, Mitchell and Gary"

So, IT WILL NOT PRINT!

File Attachments

1) SpiralCup369371.JPG, downloaded 182 times

Subject: Re: Will this print?

Posted by TechyBen on Thu, 06 Sep 2012 23:15:30 GMT

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I hope this goes well. Have you though of using "optical illusions" to make the cup appear to have a unsupported helix? Use a similar design to the DNA cup, but in a way that hides the supports?

If it was being made by hand, I'd guess you could make a square cup, fire it on it's side, then glaze it upright. Well, or fire it with any other type of support.

No idea if any of that is possible in this instance, as it's probably an automated service/system and changing the orientation half way through is not supported.

Oh, or cast it from metal? Or is that not food safe?

Subject: Re: Will this print?

Posted by opresco on Thu, 06 Sep 2012 23:41:28 GMT

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Thanks!

I've no idea why they turned it upside down, with the new break-off support and all I guess that the cup, as is, it could be printed in Stainless Steel, but this material is not food safe. Anyway, they concluded it is not printable in Ceramics and I am not going to waste any more time with it!

And, BTW, I just received the Glazed Ceramic print on the "Drink to Your DNA!" - Espresso & Sake Tower Cup

that was also "pushing the limits..

This one came out very nice, so I updated the page with actual pics.

"Drink to Your DNA!" - Espresso & Sake Tower Cup http://shpws.me/aMwe

File Attachments

1) DNACup_00.jpg, downloaded 149 times