Subject: FUDtastic
Posted by stop4stuff on Tue, 17 May 2011 11:12:43 GMT
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Euro 4 in 1 Micro Maille
As printed, this sampler patch has 0.3mm 'wire' rings with internal diameter of 1.5mm. The rings have 0.1mm spacing - I have been informed that some fo the rings have less than 0.3mm wall thickness and that I need to adjust things slighlty.

Large image here

Large image here

3 strand Mobius in FUD
My 3 strand Mobius (forum image) formed by the wax support material filling hollow space inside a block of FUD

Large image here

Tiny Kraken in crystal
A tiny squid formed by the wax filling the hollow space within a block of FUD.

Large image here

I'll be polishing the surfaces fo the above two models.

3x3x3 Twisty Puzzle (aka Rubiks Cube)
My first attempt at making the worlds smallest working Rubiks Cube - aticipating failure, I ordered 9 of the wee beasties to analyze the failures.

Large image here

First failure - mostly all of the parts were freed after soaking out the wax support material in hot water. Two of the edge pieces had fused to center pieces and three of the centers had fused to the central spider spindles. It was one of the central spindles that broke leading to this failure.

Large image here

A close up of the central spider spindles.

Large image here

On with the funFUD!

Subject: Re: FUDtastic
Posted by mctrivia on Tue, 17 May 2011 11:53:56 GMT
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cool idea of using the wax like that

Subject: Re: FUDtastic
Posted by stop4stuff on Tue, 17 May 2011 12:17:39 GMT
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Thanks
Now if only I can get the wax out of the little cubes & make them work.

Subject: Re: FUDtastic
Posted by Nane on Tue, 17 May 2011 12:41:33 GMT
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You are so crazy for making that tiny chainmail! Crazy! Like a fox! FUD really rocks. Just wow, and of course Shapeways for implementing it so fantastically and afford-ably!

Subject: Re: FUDtastic
Posted by Youknowwho4eva on Tue, 17 May 2011 12:54:46 GMT
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Is it supposed to be missing the one ring?

Subject: Re: FUDtastic
Posted by TurtlesAreCool on Tue, 17 May 2011 13:51:01 GMT
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The trapped wax looks very neat! I wouldn't have thought to use it that way.

Your models seem to have come out quite well. I guess the complexity of the outer surface may be a factor in how well the wax comes off.

Subject: Re: FUDtastic
Posted by aeron203 on Tue, 17 May 2011 14:01:39 GMT
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Very nice work, amazing detail.

Maybe a mild solvent like mineral spirits could dissolve the wax without affecting the acrylic.

Edit: I just checked on this and mineral spirits will dissolve paraffin and has less effect on acrylic plastic. Your parts have so much surface area though, it may be better to try (warm)alcohol. That won't dissolve wax as easily but stands less of a chance of softening the parts.

Subject: Re: FUDtastic
Posted by stop4stuff on Tue, 17 May 2011 14:41:36 GMT
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Youknowwho4eva wrote on Tue, 17 May 2011 12:54Is it supposed to be missing the one ring?

No, I think it was the one ring that was maybe too thin, even though all the rings are C&Pd.

@aeron203, I have some white spirit (aka mineral sprit) here somewhere... it's worth sacrificing a little cube just to find out

Thanks everyone for your good words

Paul

Subject: Re: FUDtastic
Posted by dizingof on Tue, 17 May 2011 16:06:12 GMT
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That wax effect opens up lots of ideas - well done !

Subject: Re: FUDtastic
Posted by lensman on Tue, 17 May 2011 16:40:15 GMT
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Absolutely agree with Dizingof.

This "Tiny Kraken in crystal
A tiny squid formed by the wax filling the hollow space within a block of FUD." absolutely gives me an answer to something I have been playing with in my head and not being able to come up with a workable solution. Now I do!

Glenn

Subject: Re: FUDtastic
Posted by ceramicwombat on Sat, 02 Jul 2011 04:16:44 GMT
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Cool stuff, stop4stuff!

I agree, the trapped wax is a nice effect. I recently reordered a set of dice I originally designed for Transparent Detail a year ago. I was disappointed with the resolution of Transparent Detail and scrapped the idea until FD and FUD came along. I tweaked the design and ordered a set in both FD and FUD yesterday. I saw this thread today and realized I might have been better off without escape holes for the wax. Ah well, the design may require another tweak.

And I agree with you, Dizingof, this does open up a lot of possibilities

Subject: Re: FUDtastic
Posted by mctrivia on Sat, 02 Jul 2011 05:28:04 GMT
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For dice check these out:

http://www.shapeways.com/shops/propmodule?section=Dice+Set%5 BCrystal%5D

Subject: Re: FUDtastic
Posted by sithlorderic on Tue, 30 Aug 2011 15:50:17 GMT
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Can you post pics of the parts above after you polished the exterior? I'm interested in trying to use this process to model an exploded view of an engine. Not sure if I can get the detail I would need though.

Subject: Re: FUDtastic
Posted by stop4stuff on Fri, 02 Sep 2011 06:58:37 GMT
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Here you go sithlorderic;

paul

Subject: Re: FUDtastic
Posted by aae83 on Sun, 04 Sep 2011 03:14:33 GMT
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Very nice work, Paul: lots of possibilities there!

Am wondering if a coating of Future acrylic floor polish would make those items truly transparent... might be worth a try.

Cheers,

John

Subject: Re: FUDtastic
Posted by kspaho on Tue, 06 Sep 2011 02:26:33 GMT
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Amazing work!

I love the trapped wax, definitely gave me some ideas

Subject: Re: FUDtastic
Posted by jrey on Fri, 19 Oct 2012 20:05:10 GMT
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So I suppose this is no longer possible now that Shapeways removes all interior geometry?

Subject: Re: FUDtastic
Posted by Youknowwho4eva on Mon, 22 Oct 2012 14:28:59 GMT
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If I'm not mistaken, these were printed after the software update, You just have to have a hole that is too small for the material to escape.

Subject: Re: FUDtastic
Posted by jrey on Mon, 22 Oct 2012 14:42:37 GMT
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Ah, interesting. Thanks for the info.

Subject: Re: FUDtastic
Posted by stop4stuff on Mon, 29 Oct 2012 11:10:48 GMT

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Yep, you need a very small hole (sub 0.1mm) and then some patience with Customer Services when the model gets rejected (as it will for not having a big enough escape hole) - my usual is to quote the Desgin guidelines If your escape holes (i.e., holes in hollow parts) are not big enough, there may be support wax that still remains inside when we finish producing your product. This gives your piece a frosted look, which might look cool, but might also not meet your design intentions. - and explain the model does look cool and the trapped wax is part of the design intention as a feature of the model.

On another note, as yet, I've not had an issue with the wax leaking out over time as suggested on the material page.

Paul

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Subject: Re: FUDtastic
Posted by denali3ddesign on Mon, 29 Oct 2012 15:22:37 GMT
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Hey Paul sorry if I missed it earlier in the post, but how did you polish the FUD?

Subject: Re: FUDtastic
Posted by jrey on Mon, 29 Oct 2012 15:56:22 GMT
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stop4stuff wrote on Mon, 29 October 2012 11:10Yep, you need a very small hole (sub 0.1mm) and then some patience with Customer Services when the model gets rejected (as it will for not having a big enough escape hole) - my usual is to quote the Desgin guidelines If your escape holes (i.e., holes in hollow parts) are not big enough, there may be support wax that still remains inside when we finish producing your product. This gives your piece a frosted look, which might look cool, but might also not meet your design intentions. - and explain the model does look cool and the trapped wax is part of the design intention as a feature of the model.

On another note, as yet, I've not had an issue with the wax leaking out over time as suggested on the material page.

Paul

I wonder if it would help with customer service to add (trapped wax) into the model name.

Subject: Re: FUDtastic
Posted by stop4stuff on Mon, 29 Oct 2012 19:13:03 GMT
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denali3ddesign wrote on Mon, 29 October 2012 15:22Hey Paul sorry if I missed it earlier in the post, but how did you polish the FUD?

I started out with a fine grit wet & dry paper (800 iirc) followed by a finer grit and then used some car paint cutting paste (Turtle Wax Safe Cut) with a buffing wheel on my dremel type rotary tool - the buffing stage is the most delicate, if too much pressure is applied the buffing wheel can create enough heat to ruin the surface and then its back to the paper.

Paul

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