Subject: Sprues, yes or no, please make your mind up
Posted by stannum on Thu, 06 Dec 2012 23:04:07 GMT
View Forum Message <> Reply to Message

Last order included some items attached with small sprues, and those grouped with a bigger one using loops to hold them. The received product has all the parts, but the small sprues are out of the closed loops (magic!). It's no big problem, all those wires would be cut anyway, but it would be a problem if, say, it was some kind of decoration to hang like a chain.

So could SW make some guidelines about sprues and stick to them? "Multiple parts per STL" is very vague. If you want to have extra freedom to optimize print runs, but at the same time not cause misprints, or rejects due to "items too tiny", you have to be clearer so we can just upload things grouped as best as possible for everyone.

If service wants to investigate the exact model, the id is 790695. It consists of 8 sprues with 4 small items each (and the items have some wires that aren't sprues), and the big sprue holding them.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Youknowwho4eva on Fri, 07 Dec 2012 14:04:24 GMT
View Forum Message <> Reply to Message

If your items are small, around the minimum size required for the material, you should join them together. If your items are larger than the required minimum than you should be ok not to connect them.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Michon on Fri, 07 Dec 2012 16:23:08 GMT
View Forum Message <> Reply to Message

Hi there,

First of all, thanks for using Shapeways!

That is correct what Michael says. If your items are below or near x+y+zâ‰¥12mm you would want to sprue them together so that they will not get lost during printing.
If you have further questions regarding this topic, please don't hesitate to contact service@shapeways.com

Happy Shaping!

Subject: Re: Sprues, yes or no, please make your mind up
Posted by stannum on Sat, 08 Dec 2012 02:46:30 GMT
View Forum Message <> Reply to Message

Great. The point is that such info should be in a tutorial addressing special details like any material differences that there could be. It could be completed with topics like sprueing methods. That's another thing that popups now and then, gets the obligatory pictures by some people showing how they build sprues or cages, someone questions if the cages should be added or not because someone else got one nifty cage for free, another fifth person drops to ask what is the abuse threshold, etc, etc... and then gets lost in forums until next time. Constant deja vu.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by woody64 on Wed, 26 Dec 2012 10:52:32 GMT
View Forum Message <> Reply to Message

I had this discussion very long ago (in the very early days of shapeways) and still have in mind that having multiple parts without sprues in one item is not the prefered solution for shapeways.

The simple reason for that is:
- if not connected they have to handle each item seperatly during post processing (cleaning, packing) ...

Is that still correct?

Woody64

Subject: Re: Sprues, yes or no, please make your mind up
Posted by AmLachDesigns on Sun, 30 Dec 2012 19:02:52 GMT
View Forum Message <> Reply to Message

So does this mean we are allowed to have multiple unjoined parts, say pendants in silver, and pay only one handling fee? Or would it still apply to each part?

Thx

Subject: Re: Sprues, yes or no, please make your mind up
Posted by stannum on Sun, 30 Dec 2012 23:37:46 GMT
View Forum Message <> Reply to Message

AmLachDesigns, in silver it's not allowed except for earrings and cufflinks, check the material info pages.

Woody64, the order that caused this thread had also three repeated items and they were packed in the same bag even if they were paid in full. Cleaning would had been the same, sprue or not, they just saved two bags. Other person reported a similar issue, but with Sandstone, and that one was bad as the parts scratched each other in travel. And others showed kits with many tiny Sandstone parts or single but small, and they were printed anyway even if no part reached the minimum bounding box in the info pages (outdated?).

Based in puzzles and other example, we can guess Strong Flexible family will be yes with many parts, as long as they are not tiny. So until official resolution, you could say no sprues for big & medium parts, and group small ones into something that is medium at least. Cleaning a big sprue can be worse than some smaller parts and/or sprues, it behaves like a trap.

But the point is that everything (the cases for no, for yes, for yes if...) should be documented and enforced.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by stonysmith on Mon, 31 Dec 2012 01:11:47 GMT
View Forum Message <> Reply to Message

Back when the "startup fees" were instituted, they told us that mutiple separate parts per file (except silver) were permissable. BUT.. We were also told at that time that if there were too many abuses of the system, then they would have to implement a startup fee PER SHELL within each file.

Your objective should be items that can be manipulated with human fingers. (sometimes large fingers)

Imagine this item without the sprues: http://shpws.me/lLmq The individual peices are only 6mm cubes, and they tend to crush quickly if too much force is applied. But, in this configuration, they pass the checks (and shipping) just fine.

If I setup this model as 25 independent peices then it would be 25x the work to fetch it out of the printer. That's what you've got to avoid. If we create too many separate peices, then they will be forced to implement higher handling costs or shell-count rules that would be prohibitive.

Imagine http://shpws.me/lmiz if I didn't have the sprues.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by AmLachDesigns on Mon, 31 Dec 2012 08:28:03 GMT
View Forum Message <> Reply to Message

Stannum,

I thought I knew the rules about this for silver, but I believed they applied also to other materials, which was my mistake: that's why I was surprised by this thread, and just wanted to check.

I do agree, though, that more documentation on this and other design rules would be very welcome. The more that it is possible to know in advance what will and will not print/ship, and will do so reliably time after time the better.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by stannum on Sat, 05 Jan 2013 00:54:01 GMT
View Forum Message <> Reply to Message

News... it seems if you ask for checks, analisys is run over the raw file, not the meshmedic result. So some hundreds of shells that form 16 final items are not acceptable, when a couple of weeks before they were and similar things had been printed many times.

So booleans are now needed? Then how do you take what was said about sprues? Yeah, you thought some desing approaches worked, that items were printing fine... well, forget it.

The customer is starting to get bit red, by the way.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Tresob on Tue, 29 Jan 2013 16:40:02 GMT
View Forum Message <> Reply to Message

This is actually a very helpful conversation, and I can see how abuse is hard to determine.

When my item only costs about $2 to make, that $1.50 handling fee makes ordering a test run seem very prohibitive. But I certainly don't want to cheat the system by dumping too many objects in one file.

In particular, I'm thinking of items that are about about 12mm cubed (little robot helmets for mini-figs). Even if I sold them individually in my store, it would be handy to test them out in larger lots first...but those sprues do kind of get in the way.

So I guess it would be good to know how many objects gets obnoxious.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Youknowwho4eva on Tue, 29 Jan 2013 16:57:32 GMT
View Forum Message <> Reply to Message

I'm liking the discussion guys. And I also feel it should be easier to determine. I think items that are a problem with abusing the allowance, will be notified and asked to modify. I'm glad you guys don't want to abuse and lose. If it becomes a hot internal issue, we'll make everyone aware before making any changes.

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Mhagan on Wed, 30 Jan 2013 21:08:01 GMT
View Forum Message <> Reply to Message

For a bit of perspective, I thought I would show all of you what a build looks like straight out of the printer

When you have a part printed in WSF we have to find it inside of this. It is really amazing how small of a part our post processing technicians can find in there, but they are not perfect. It is extremely helpful if you connect multiple shells that are near the minimum bounding box together. Multiple shells near the minimum bounding box make our post processing technicians very sad

File Attachments

1) Your part is here.jpg, downloaded 442 times

Subject: Re: Sprues, yes or no, please make your mind up
Posted by stonysmith on Thu, 31 Jan 2013 00:32:08 GMT
View Forum Message <> Reply to Message

LOVE the picture!!! That's exactly what i've been trying to express!

Also.. remember that they start cleaning this by hitting it with an airhose. If you have some small loose parts.. they're gonna fly! <grin>

Subject: Re: Sprues, yes or no, please make your mind up
Posted by UniverseBecoming on Tue, 02 Apr 2013 14:37:07 GMT
View Forum Message <> Reply to Message

How practical would it be to print a cage around each order for 3D printing processes that use a powdered support structure? The mesh size would correspond to the smallest part in the order. Doing this would provide many benefits for Shapeways, such as:

You could also add a bar code to the cage that could be scanned; so no more trying to figure out what parts correspond to each individual order.

No more manually cleaning of parts. The whole powder block would be placed into a machine similar to a clothes dryer and then it would be gently tumbled to remove the bulk of the powder while jets of air would take care of removing the powder from the finer details, thus increasing the speed of production.

Each cage serves as a container for transporting throughout the facility and ultimately to shipping.

The cages could be designed with a built in henge and latch mechanism so that it could be easily opened.

No more concerns about multiple part orders. Customers could order their multiple part designs without concern of rejection or lost parts. Over time Shapeways receives more orders cuz there are less restrictions or mishaps and customers are happier.

The cages could either be opened and emptied into their respective shipping containers and then thrown into a grinding machine for recycling or they could simply be part of the protective packing and shipped as is.

Overall cost could be lowered being that manual processing would be drastically reduced.

I should patent this!

Subject: Re: Sprues, yes or no, please make your mind up
Posted by wedge on Fri, 05 Apr 2013 12:20:56 GMT
View Forum Message <> Reply to Message

Quote:Multiple shells near the minimum bounding box make our post processing technicians very sad
Yes But ...
There a two Problems for me as designer.
1. Where to Sprue the Objects? The place where I Sprue them together should nod be visible in the final Product. Else the Customer hast to clean up the parts.
2. Polishing. If I Sprue 2 Objects together will they Polished everywhere. Example my Minifigure fins (http://shpws.me/nwb0). If I sprue them together, will they polished properly on the sides where the two fins are sprued together?

Subject: Re: Sprues, yes or no, please make your mind up
Posted by Youknowwho4eva on Fri, 05 Apr 2013 12:53:43 GMT
View Forum Message <> Reply to Message

Your pieces have a hole, so you could create a post to go through the holes to hold the pieces together without deforming your model.
The polishing is don't in a tumbler, so if you sprue things, leave enough space for the polishing material to travel between.