
Subject: fill a WSF model to make it heavier
Posted by [cfm](#) on Mon, 19 Sep 2011 16:09:33 GMT
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Can anyone give me advise on how to fill a hollow SWF model to make it a heavier "sculpture"? I was thinking of a strong type of plaster or polyester with some white sand in it. It has to be white, so that the sculpture has an even white color.

Perhaps a better question is: what NOT? What is a dangerous product to use in my SWF models? Can it melt, expand, blow up, shrink?

File Attachments

1) [Hybrid Male small prints 15web klein.jpg](#), downloaded 126 times

Subject: Re: fill a WSF model to make it heavier
Posted by [stannum](#) on Mon, 19 Sep 2011 18:32:04 GMT
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Polyester resin will shrink a bit, and will heat a lot and even crack if you do a big volume in a single pour. You can get it in transparent or slightly tinted, plus also add pigments or even fillers, which will help with the heat and also make it cheaper.

Polyurethane is also a good resin, easier to mix as it normally goes 1:1, just check prices. Adding sand to any of the poly would work, but make them hard to pour, dust is a better filler in general (marble, etc).

As for plaster, you can mix it with fibers, special acrylic resins or even plain PVA glue to get a stronger block. In any case, the WSF will give you an external shell that contains everything, so even in the case of internal cracking, outside it should all be OK. Probably the simplest, as the others are toxic, flammable...

No matter which you pick, go a bit by bit until you get the idea of how much heat the selected product generates, and also seal the inner surface in the first pour. WSF can withstand pressure and heat (dyeing is done in boiling water), but it'll melt if pushed.

Subject: Re: fill a WSF model to make it heavier
Posted by [stefan_z](#) on Tue, 20 Sep 2011 18:47:55 GMT
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Well fill it with fishing-weights (lead-balls) and pour wax over that. Or some resin with little heating and small expansion/shrinking.

For the bottom I would print a lid that fits snug with the sculpture and then poxy that in when the lead is in place.

Non-harmfull lead-substitutes would be:
Gravel / Ceramics / Marbles / Baby-Teeth / Jelly Beans

You should also take into account that the filling will alter the way how your product will look in intense light situations.

Subject: Re: fill a WSF model to make it heavier
Posted by [pfeiffer stylez](#) on Tue, 20 Sep 2011 18:50:10 GMT
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I use gypsum, or even spackle... whatever currently is left over. ^^

Cheap, easy to handle, and non-toxic.

Subject: Re: fill a WSF model to make it heavier
Posted by [stefan_z](#) on Tue, 20 Sep 2011 18:54:49 GMT
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Nice alternative: A LED-christmas-chain plus some Batteries
sparkle

Subject: Re: fill a WSF model to make it heavier
Posted by [cfm](#) on Tue, 20 Sep 2011 18:57:04 GMT
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Nice! I'll have a special Christmas edition!!

Subject: Re: fill a WSF model to make it heavier
Posted by [cfm](#) on Tue, 20 Sep 2011 19:01:20 GMT
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Thanks for your reply! I am a heavy user of polyester etc. so know all the difficulties of the material. For me I was curious what the SWF would do. I think that I will use plaster/ gips filled with white sand. Its cheap and it won't harm the material. This all goes for the white model.

Thank you all for your help, appreciate it!
Catharina

Subject: Re: fill a WSF model to make it heavier
Posted by [jgarnham](#) on Thu, 22 Sep 2011 18:48:34 GMT
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I would go for epoxy laminating or self-levelling resin rather than smelly polyester resin because it sets too quick. Adding lead shot (from a fishing shop) is a good idea, although I don't think its made from lead any more. I buy my epoxy resin from a small company called fibretech -

John

Subject: Re: fill a WSF model to make it heavier
Posted by [pfeiffer stylez](#) on Thu, 20 Oct 2011 09:25:05 GMT
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cfm wrote on Tue, 20 September 2011 19:01Thanks for your reply! I am a heavy user of polyester etc. so know all the difficulties of the material. For me I was curious what the SWF would do. I think that I will use plaster/ gips filled with white sand. Its cheap and it won't harm the material. This all goes for the white model.

Thank you all for your help, appreciate it!
Catharina
Sand !
Important !!!

Don't worry about the weight, but sand is volume without shrinkage.
A big volume of pure gips might deform models with very thin walls during the drying.

Subject: Re: fill a WSF model to make it heavier

Posted by [cfm](#) on Thu, 20 Oct 2011 09:31:48 GMT

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Thank you for your reply. Still have to do the filling. I bought some silversand, to be used for decorative purposes. I will mix that with 'elfenbein'plaster. That's a very hard plaster and easy to sand because of the hardness.

When the job is done I will report my results here.

Ciao, Catharina

Subject: Re: fill a WSF model to make it heavier

Posted by [BillBedford](#) on Thu, 20 Oct 2011 11:20:15 GMT

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Why not fill the piece with sand and then use plaster as a plug? that would avoid posible distortion if the plaster expands.

Subject: Re: fill a WSF model to make it heavier

Posted by [cfm](#) on Thu, 20 Oct 2011 11:37:35 GMT

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As a matter of fact, I was thinking of filling the piece with sand and plug it with wax or so. But pure white sand and just a a bit of plaster could do. I must say that the object has the opening at the bottom so the filling will push with all its weight on the plaster'plugs'.
But I guess this is probably the safest way to fill it.

Thank's for your post!

Subject: Re: fill a WSF model to make it heavier

Posted by [pfeiffer stylez](#) on Thu, 20 Oct 2011 12:00:46 GMT

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BillBedford wrote on Thu, 20 October 2011 11:20Why not fill the piece with sand and then use plaster as a plug? that would avoid posible distortion if the plaster expands.
I was worried about deformations caused by the weight. That wasn't a problem.
But this...

... happened to my first AerofoilTower. -.-"
(Frosted Detail, 0,5mm walls, filled with the cheapest gips available at our local DIY store)

Since then I use the gips just as binding material for a huge amount of bird sand. ^^

File Attachments

1) [CIMG1950.png](#), downloaded 337 times
