
Subject: Dyeing polished white strong and flexible
Posted by [gibell](#) on Tue, 02 Apr 2013 13:43:58 GMT
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I have been dyeing Shapeways WSF material for two years now using RIT fabric dyes. Recently, I have been having more and more problems with the process. A friend had heard from the Disk Golf community that RIT has changed their dyes recently, and the new dyes do now work as well on plastics. I have found that the new formula RIT dyes, which have a code on the top which begins with "ND", do not work very well for WSF. In addition, polished WSF in general is more difficult to dye compared with ordinary (unpolished) WSF.

What other dyes have people used? What dyes work best on polished WSF? The dye that Shapeways uses seems to be very nice. Any hint as to who makes this dye?

Here in the USA, Jacquard dyes are an alternative to RIT. They make iDye Poly, which is specifically for synthetic fabrics (so probably good for nylon), as well as a line of "acid dyes". Has anyone experience with either of these?

Subject: Re: Dyeing polished white strong and flexible
Posted by [AmLachDesigns](#) on Tue, 02 Apr 2013 15:23:47 GMT
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Check out 58771 it msy be useful.

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Tue, 02 Apr 2013 22:37:20 GMT
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Thanks, that thread is very useful. That thread only discusses dyeing in black. I am interested in all colors!

Subject: Re: Dyeing polished white strong and flexible
Posted by [AmLachDesigns](#) on Wed, 03 Apr 2013 06:14:29 GMT
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Shows what I know - to me dying is dying...

All non-white strong and flexible products sold by Shapeways start off white and are dyed, by SW.

The link I gave is some people doing the dying themselves of wsf.

Subject: Re: Dyeing polished white strong and flexible

Posted by [gibell](#) on Wed, 10 Apr 2013 17:20:42 GMT

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Over the past week I have been dying polished WSF using Jacquard acid dyes. The results have been somewhat mixed. Yellow sun turned out beautifully and perfectly evenly. Chestnut brown is OK but the color is a bit uneven.

One thing that seems to happen quite often in any dying process with polished WSF is that the color can appear very uneven during the dying process. This unevenness is always oriented with the print orientation. The "top" of the pieces as printed appears much lighter than the "bottom". The interesting thing is that most times this unevenness goes away after the parts dry, in other words it is only visible when the pieces are wet. And for some reason I have never seen it happen with unpolished WSF.

I have not seen any unevenness in the Shapeways dyed polished WSF. Perhaps I will try wetting some of these pieces to see if it becomes visible.

Subject: Re: Dyeing polished white strong and flexible

Posted by [gibell](#) on Sun, 21 Apr 2013 14:21:57 GMT

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Here are some photos of my latest tests. ALL material shown is polished WSF. The first two pieces were dyed by Shapeways.

Left: purple as dyed by Shapeways (this is polished WSF dyed purple)

Right: coral red as dyed by Shapeways

These are both excellent, very uniform and bright colors!

File Attachments

1) [IMG_2507_crop1.jpg](#), downloaded 860 times

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Sun, 21 Apr 2013 14:24:53 GMT
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Next we have some less successful colorings ...

Top left: Jacquard Acid 601 Yellow Sun, best of the bunch! The color is very even.

Top right: Jacquard Acid 632 Chestnut, dark and uneven, although the unevenness doesn't show so much in the photos.

Bottom left: Jacquard Acid 627 Kelly Green, despite boiling for 45 minutes, the color is way too light, a strange neon green.

Bottom right: Jacquard iDye Poly 452 Green, way too dark in only 5 minutes, barely identifiable as green. Dye concentration may have been too high.

File Attachments

1) [IMG_2504_crop1.jpg](#), downloaded 855 times

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Sun, 21 Apr 2013 14:30:46 GMT
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Blue, anyone?

Top left: RIT Royal Blue, the new formula. Dark and uneven, looks better in this photo than in reality.

Top right: Jacquard Acid 623 Brilliant Blue. Excellent color, slightly uneven. Overall the best blue.

Bottom left: Jacquard iDye Poly Blue. Very even and nice color. More shifted towards red than the previous two, appears violet in comparison.

Bottom right: Jacquard Acid 617 Cherry Red. Excellent color, but more pink or fuchsia than red.

File Attachments

1) [IMG_2508_crop1.jpg](#), downloaded 887 times

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Sun, 21 Apr 2013 20:08:27 GMT

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Reds:

Top left: Jacquard Acid 617 Cherry Red. Excellent color, but more pink or fuchsia than red.
Top right: Jacquard Acid 618 Fire Red. Poor color saturation. Even, but more like a salmon color.
Bottom: Jacquard iDye Poly Red. Very even and nice color. A bit dark.

File Attachments

1) [IMG_2511_crop1.jpg](#), downloaded 789 times

Subject: Re: Dyeing polished white strong and flexible
Posted by rosethun@yahoo.com on Wed, 24 Apr 2013 12:30:40 GMT
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Thanks for the pictures; I will have to try- even with uneven colors they are quite gorgeous and you could do an interesting dip dye process too.

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Wed, 24 Apr 2013 13:35:10 GMT
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Strange how the photos always seem to make the colors look better than they appear in person. The three blues, for example, are quite different, but the photo makes them look very similar.

Dip dye would be quite tricky, given that the mixture is boiling (generally)! But an interesting idea!

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Fri, 26 Apr 2013 15:22:11 GMT
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Purples:

Top left: Jacquard Acid 612 Lilac. Good color but a bit light. This is the only one that looks purple

to me.

Top right: Jacquard Acid 613 Purple. Good color but is virtually identical to blue.

Bottom left: Jacquard Acid 614 Violet.. Slightly redder but still appears basically blue.

Bottom right: Jacquard Acid 623 Brilliant Blue.

This photo was taken outdoors. Under artificial light all 4 colors appear identical in a photograph!

File Attachments

1) [IMG_2517_crop1.jpg](#), downloaded 731 times

Subject: Re: Dyeing polished white strong and flexible

Posted by [gibell](#) on Fri, 03 May 2013 13:35:02 GMT

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more colors in iDye Poly ...

Top left: iDye Poly brown, nice and even, best brown yet.

Top right: iDye Poly Black, very dark and even, best black.

Bottom: iDye Poly Green, best green yet! I show this color above but before the dye concentration was too high.

File Attachments

1) [IMG_2519_crop1.jpg](#), downloaded 671 times

Subject: Re: Dyeing polished white strong and flexible

Posted by [gibell](#) on Mon, 10 Jun 2013 14:52:08 GMT

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After much experimentation, I now have a set of 7 colors that I am happy with. Besides nice color, one of my criterion is that the colors appear different from one another. Here are the 7 Jacquard dyes I now use:

Blue: acid dye Brilliant Blue

Red: acid dye Cherry Red

Yellow: acid dye Yellow Sun

Purple: iDye poly Violet

Green: iDye poly Green (still looking for a better green)

Brown: iDye poly Brown
Black: iDye poly Black

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Thu, 08 Aug 2013 18:57:46 GMT
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Do you mind saying what concentration, duration and temperature you used for the green poly?

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Mon, 12 Aug 2013 14:30:56 GMT
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NormL wrote on Thu, 08 August 2013 18:57Do you mind saying what concentration, duration and temperature you used for the green poly?

The trick with the green seems to be very low dye concentration. I only use 1/10 to 1/20'th of a dye packet in 1 liter of water, whereas with other colors I can use up to 1/4 of a dye packet. I boil the parts for about 5 minutes for green, whereas for other colors the time can be considerably longer. I live at altitude 1600m, so my boiling temp is reduced by 6 degrees C or so.

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Mon, 12 Aug 2013 14:39:11 GMT
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Thank you! My Washington "The Evergreen" State elevation maps are very appreciative. They just don't look right in red or black.

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Mon, 12 Aug 2013 15:07:09 GMT
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I am still looking for a better green. The iDye Poly Green still seems too dark to me, even in low

concentrations, I would like something brighter. I had high hopes recently for the new color: "iDye Poly Kelley Green", but I tried it recently and I think I again overdosed the dye. It came out too dark. It is all too easy to go overboard on green in particular.

Shapeways used to have a green that was quite bright, but the color was discontinued. I am not sure what dye brand they used ...

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Sat, 17 Aug 2013 21:50:17 GMT
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They are still a little wet, but, you were not kidding about how quick they take color!

This was my first test on the Evergreen State, LOL

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Thu, 22 Aug 2013 14:47:17 GMT
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I do see what you mean about needing a better green. It is a little too drab in person. It works fine for a cartoon about a state, but, for just a green object it does need to be brighter. Thank you for your help

Subject: Re: Dyeing polished white strong and flexible
Posted by [gibell](#) on Thu, 22 Aug 2013 20:19:00 GMT
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NormL wrote on Thu, 22 August 2013 14:47 I do see what you mean about needing a better green. It is a little too drab in person. It works fine for a cartoon about a state, but, for just a green object it does need to be brighter. Thank you for your help

Is your model normal WSF, or polished WSF? Normal WSF absorbs dye better than the polished WSF, and thus will become darker even faster. My parts above are all polished.

In any case, I agree we need a brighter green.

Do you have a "Colorful Colorado" version of this? I live in Colorado ... you could print it in color

Sandstone ...

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Thu, 22 Aug 2013 20:20:49 GMT
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Normal rough old WSF

Subject: Re: Dyeing polished white strong and flexible
Posted by [NormL](#) on Mon, 26 Aug 2013 03:59:58 GMT
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Yes, Colorado is on it's way
