
Subject: Black dye WSF & PWSF

Posted by [tomrust](#) on Mon, 17 Dec 2012 22:32:37 GMT

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We've been unhappy with the general evenness & surface quality of the black SF material. 1/2 of our customers want black products to match their phones, so it's become a high priority to try to find a better black material.

We also REALLY like the surface quality of the PWSF material, and so do our customers. Its smoother & has less of a gritty feel.

So we've started running some tests of dyes.

We first tried Rit dye Black, using a formula of 8 cups water, an 8 oz liquid bottle, and 8 teaspoons of vinegar. We heated to 60C (that was the recommended temp) and immersed parts for up to 6 hours. The WSF got quite dark, but always had a bluish cast - not a true black. PWSF was much worse - a nice navy blue but NOT black.

Today we tried iDye Poly from Jacquard Products in Healsburg, CA, bought at a local Joanne's Fabrics. About \$4 per packet, which includes the powder dye & the brightener. Again the formula was poured into 8 cups water - just a bit more than needed to cover the parts

This we ran at 80C for 1 hour on a WSF, and 40m on 2 PWSF parts. The photo of the result is enclosed - the PWSF parts on the left, the WSF on the right.

You may need to adjust the brightness to see the engraved Nautlius logo. But we were reasonably pleased with these initial results.

One issue - for some reason the PWSF parts had a buildup of dye on the surface after removal. Hot water and detergent cleaned it off nicely, no change to the color. I spoke with Monty Witherby (sp?) at the company who recommended running at 100C (keep it at boiling) but we kept it below 80C as the data sheets recommended 80C max temps, even though the softening point of the nylon is much higher.

Note the WSF & pWSF are just slightly less dense than water, so parts float (barely). We stirred the baths every 5-10m, & had the logo faced down. Yet all sides were covered quite evenly.

File Attachments

1) [dyepix.jpg](#), downloaded 1491 times
