Electrostatic problems with DyeSub direct printers

December 2008

Sehr geehrte Damen und Herren, Dear Customer

We like to summarise our research with **static problems** with open flag 3745/3 eco flag 117.

***Sources of information*:**
Technical specialists from d.gen and Multiplot

Technology:
DyeSub direct print with waterbased inks on open fabrics

description of problem:
When you print on a open fabric like flag, the ink that shoots through the fabric cannot enter the basin, it gets rejected and lays down on the backside of the fabric.

***Visual characteristics*:**
around dark letters appear (already after print before the fixation) uncontrolled foggy spots/shaddows in all directions. If the spots/shadows appear just in the printdirction, we talk about a different phenomenon.

Reason:
the superflous ink penetrating the fabric (which cannot stick to the fabric) cannot reach the basin, because the basin rejects the entry. The reason is the different static tension of the machine, the fabric and the ink. The ink returns in the air upstairs, there is the backside of the fabric. Here it lays down uncontrole around the spot where it should have been.

***Solution*:**
a mayor factor enforcing the problem is the air humidity, the drier the air, the worse the problem usually gets. Therefore it is recommended to use a climatised production surrounding (best minimum 50% humidity).

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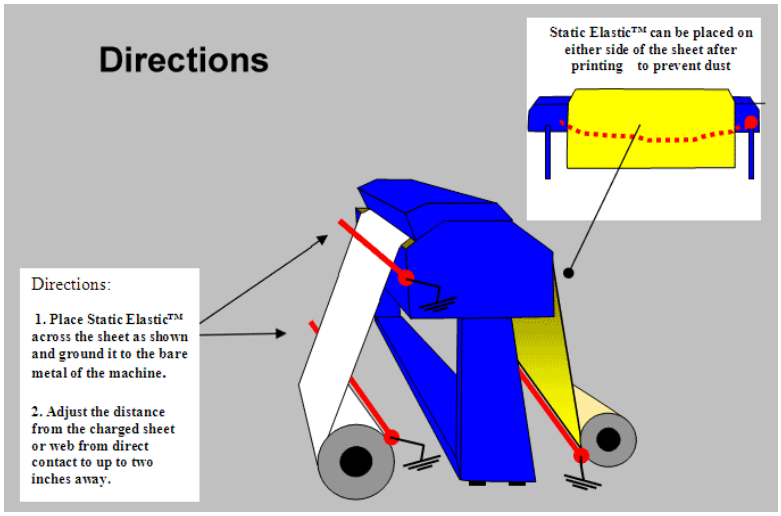

Further on, Multiplot offers a Ionenstab to reduce the phenomenon from the tecnical side, there is a company www.stopstatic.com selling a staticstring which helps as well to reduce the tension. Dear Customer it is very helpfull as well to put a metall wire in each side of the inks basin and put it in the socket (earthing). Very helpfull is also to fill some wasteink in the inkbasin, ink seems to be better than water.

As well, the fabrics should not be teared over a syntetic carpet. The printer should not stand on a syntetic carpet, a rubbermat is best. Even though the Bergercoating "+w" is the strongest antistatic finishing (strongly hydrophilic), problems can appear on very dry days (cold days, less than 40% humidity) .All Bergerfabrics have an antistatic finishing. How the static tension appears and how it disappears seems sometimes a miracle, but considering the influencing factors the problem can be minimised.

Sincerly

Your Berger Team