

PRINTING – PART XI

REF: TT/ JULY 2021/ WK 3

Fixation processes

Once printing is done, the printed substrates go through fixation processes to completely fix the ink to the substrate. Each ink technology has different fixation requirements.

- Reactive ink printed substrates are fixed by steaming in atmospheric steamers for recommended time. The fabrics then undergo a washing procedure; each wash cycle removes an amount of unfixed dye which remains on the surface after printing.
- Acid inks are also fixed by steaming. It takes longer duration than reactive based inks. Washing off cycles are necessary for this type of ink as well.
- Disperse inks require different fixation methods depending on whether they are transferred from paper or printed directly onto the fabric. In transfer paper printing method, paper is transferred in a press at recommended temperature and time. When disperse inks are directly printed on the fabric, the printed fabrics are cured at recommended temperature. Washing is also necessary after it.
- Pigment inks are fixed by curing at recommended temperature and time.

D) High Density Printing

High Density printing is a screen printing method that adds texture and depth to a graphic. High density is a special effect that rises straight up off the garment and has a hard rubbery feel with sharp edges. It has slight glossy finish. High density ink allows achieving 3D effect.



Fig 1.1 High Density Printing on T-Shirt

Ref: saltycustom.com



In this printing, a high density ink called plastisol ink is passed through a special screen that holds the ink within a limited area. This high density ink allows achieving a three-dimensional effect with sharp, well defined outlines. It gives thick prints on the surface of the garments.

PLASTISOL INKS

- **The inks used in high density printing.**
- **Plastisol inks are composed of PVC resin and plasticizer.**
- **They do not adhere to the substrate.**
- **They do not color the fibres like dyestuffs.**
- **They wrap around the fibers and makes mechanical bond with the fabric.**
- **These inks are very easy to print.**

High Density inks cannot be used for graphics with fine details and complex designs. They work best with solid and bold graphics like text or symbols. If the design is extremely complex, you may not get the best effect. High density inks give an outstanding clean finished print. The hardened ink layers produce a durable print

References:

1. <https://indiantextilejournal.com/>
2. <https://www.sculpteo.com/>
3. <https://wannaink.com/>
4. <https://prepresstoolkit.com/>

.....To be continued.....

UNSCRAMBLE THE JUMBLE WORDS

SITYDEN

ASTIPLSOL

RAPGHICS

ANCLE

Last week`s Answers: 1) TRANSFER 2) MEDIUM 3) RELEASE 4) LIGHTER

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