

Ink requirement: Amount of ink required to print per unit area at a certain density level. The amount of ink transferred to the paper is determined by weighing and the corresponding print density. Printed samples measured with stepped densities and weight of printing disc measured before printing and after printing.

Ink consumption

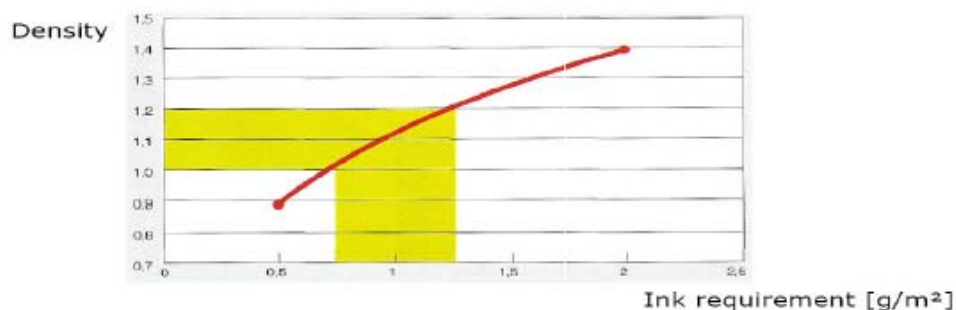
The amount of ink consumed depends on the properties of both the paper and ink used. A highly porous substrate need higher amount of ink to achieve the required solid ink density while less porous papers need comparatively lesser ink. Therefore, to study the ink mileage of different paper substrates, a standard ink has to be tested on different paper substrates. Ink requirement also depends upon the ink formulation and the colour strength of the pigments. Hence to check the ink mileage of different inks, the inks has to be tested on a standard paper.

Ink Requirement – g/m²

The amount of Ink transfered to the paper is determined by weighing and the corresponding print density.



Print samples with stepped densities are produced



Refer the table below. Here, three black inks are tested on a standard paper.

Ink 1

Ink Requirement g/m2	Print Density
1.17	0.96
1.37	1.04
1.46	1.10
1.66	1.16
2.05	1.24

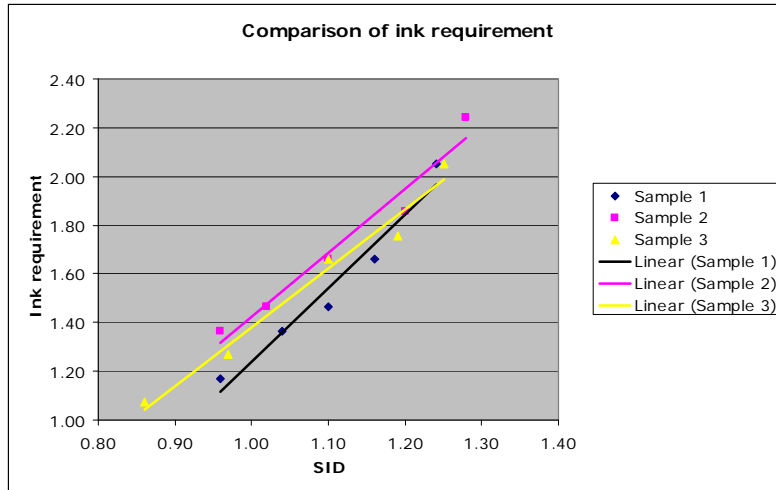
Ink 2

Ink Requirement g/m2	Print Density
1.37	0.96
1.46	1.02
1.66	1.10
1.85	1.20
2.24	1.28

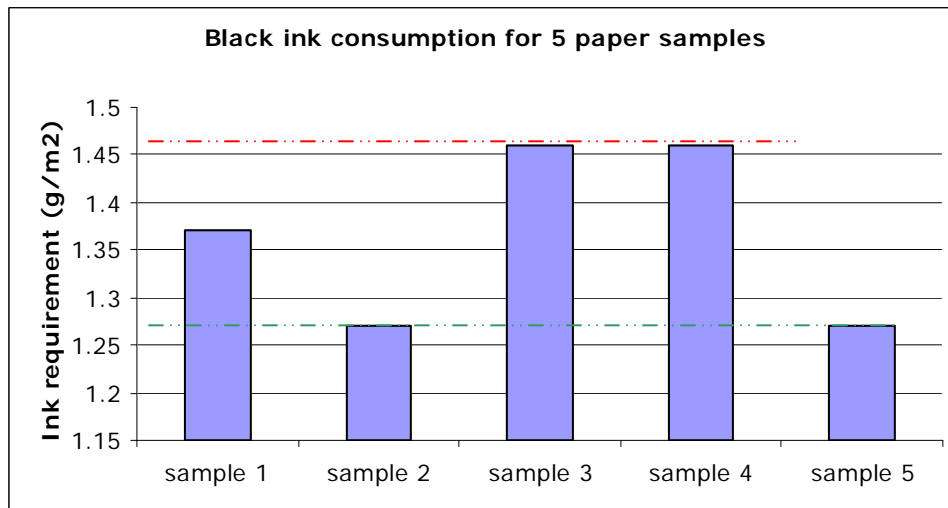
Ink 3

Ink Requirement g/m2	Print Density
1.07	0.86
1.27	0.97
1.66	1.10
1.76	1.19
2.05	1.25

From the chart below, the trend line shows that ink sample 1 shows least ink consumption followed by sample 3. Sample 2 shows the highest ink consumption. Also from the table we can arrive at a calculation that sample 2 needs around 12% more ink to reach a density of 1.10 compared to sample 1. This exactly transforms into your cost of ink. 12% savings in ink is a substantial savings. When publishers spend millions of bugs in ink, consider the amount of savings in money.



As said earlier, paper plays an important role in ink consumption. The chart below shows the ink consumption for black ink for 5 different paper samples tested with same ink.



Here, paper 2 and 5 shows around 13% lesser ink consumption compared to sample 3 and 4. Again, 13% is a substantial savings.