

Adobe Customer Services

Calibration for Dot Density

DENSITY CONVERSION CHART

Choose a Maximum Black Value (D-Max) column, and then read down that column to find corresponding density values for percentage black

% Black	3.0	3.6	4.0	4.4
0%	0.000	0.000	0.000	0.000
10%	0.046	0.046	0.046	0.046
20%	0.097	0.097	0.097	0.097
30%	0.155	0.155	0.155	0.155
40%	0.222	0.222	0.222	0.222
50%	0.301	0.301	0.301	0.301
60%	0.397	0.398	0.398	0.398
70%	0.522	0.523	0.523	0.523
80%	0.697	0.699	0.699	0.699
90%	0.996	0.999	1.000	1.000
100%	3.000	3.600	4.000	4.400

- When reading negatives, remember that % Black values will be flipped. A 20% screen in your artwork will be read as an 80% screen by the densitometer.
- It is important to make sure you are obtaining your chosen Maximum Density before you begin to fine-tune your intermediate densities with the tint adjustment table. The tint adjustment table cannot increase the Maximum Density. The imagesetter itself needs to be calculated to obtain Maximum Density. The values across the chart are basically the same until you get to the higher values. Values change dramatically at the high end, in the last 10% of maximum density. Maintaining a 98% screen different from a 100% screen is critical (the same as 0% and a 2% screen).
- Transmission Densitometers may return a value from 0 to 5.0. You need to translate the values from percentage to this other unit value. The above table may help.
- If you are reading a 10% screen and get values of 0.027 (6%), enter the 0.027 in the 10% field of the tint adjustment chart. The tint adjustment chart will calculate and compensate so that when the tint adjustment table is used, the 10% screen will come out reading 0.046 (10%).
- Make sure that you are compensating for the consistent value of the base material (film is never perfectly transparent), usually reading at 0.05 units.

