

**RR DONNELLEY**

# SEPARATION AND OUTPUT SPECIFICATIONS

The following guidelines are suggested to help attain the highest, most consistent level of quality on press. We encourage communication between the RR Donnelley plants, customers, and their suppliers, to ensure that any special concerns are discussed at the start of a project.

## **TOTAL PRINT DENSITY FOR FOUR-COLOR ILLUSTRATIONS**

- Uncoated and film-coated paper: 280%
- Matte-coated paper under 60#: 300%
- Matte-coated paper 60# or over: 320%
- Gloss-coated paper under 60#: 320%
- Gloss-coated paper 60# or over: 340%

## **BLACK AND WHITE ILLUSTRATIONS**

- Black halftones should be prepared with a 2% - 3% highlight dot (maintaining a 5% crop) and a 92% - 96% shadow dot regardless of paper stock used. Tonal reproductions should be prepared linearly between the highlight and shadow.

## **DUO-TONES AND TRI-TONES**

- Duo-tones should not surpass 180% in total density.
- Tri-tones should not surpass 270% in total density.

## **DOT STRUCTURE**

- Round dots are preferred; with square and elliptical dots also accepted. This is dictated by the manufacturing divisions at the CTP device and is based upon content and paper grades. (See "Line Screen" below.)

## **DOT GAIN**

- There should be no adjustment to the files or Color Guidance based upon anticipated dot gain achieved on different types of presses or different paper grades.
- All File Prep and Color Guidance should be prepared to GRACoL specification, (i.e. a certified Level 1 proof) regardless of paper stock. This allows files and guidance to be used on reprints or other titles even if they are printing on a different substrate.
- Any differences in the print reproduction characteristics between different papers will be accounted for at the CTP output device. This is managed at the Divisional level and provides great flexibility for file compositors, publishers and printer.
- See "Color Guidance" section below.

## **BLACK PRINTER**

- The black separation should not extend down into the highlights or quarter-tones, as this restricts the density the press can maintain for bold and dark looking type and overall contrast of images. We recommend that the black start at 30% to 35% of the three-color gray balance.

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[www.rrdonnelley.com](http://www.rrdonnelley.com)

## **RESOLUTION AND FILES**

- Digital image files containing tonal areas should have a resolution between 200 dpi and 305 dpi, or 10 to 12 pixels per millimeter at 100% of the final output size.
- Line art and text art should be scanned at 600 to 1,200 dpi, depending on detail. A resolution of 1000+ is recommended for fine detail, assuring that the lines have smooth edges.
- Multi-color files should always be furnished in CMYK format; not in RGB or LAB format.
- Black and white halftones should be supplied as grayscale formatted—not monochrome—images.

## **LINE SCREEN**

- Film coated, and uncoated papers:  
Recommend 133 line screen  
Acceptable to 150 line screen
- Matte and dull-coated papers:  
Recommend 150 line screen  
Acceptable to 175 line screen
- Gloss-coated papers:  
Recommend 175 line screen;  
Acceptable up to 200 line screen
- Manufacturing divisions will default to the recommended line screen unless it is agreed upon by Customer, Customer Care, and Quality that a predetermined line screen is attainable.

## **TINT BUILDS**

- No builds should be made using tint values under 4%.
- Tints used throughout a project need to have a recognizable difference in the colors. Tint builds that are too similar will not remain distinguishable on press. We recommend differences of 20% in the dominant color and 15% in the sub-dominant colors. Yellow should not be counted as a dominant color, regardless of its value, when used with any other colors.

## **COLOR GUIDANCE**

- The color guidance received must be representative of the file or film received.
- Neither the files nor the proofs should be adjusted for anticipated press performance.
- Guidance should be prepared within GRACoL parameters, and should not be adjusted for print characteristics of different papers, (see "Dot Gain" above). We recommend accessing [www.gracol.org](http://www.gracol.org) for detailed information regarding the GRACoL specifications and best practices.
- It should be noted that different colored paper stock can provide overall color shifts on press from the Color Guidance submitted. The Print Division and Compositor should be consulted if there is a question on this.
- See the "Color Guidance: Proof Identification" chart for the acceptability and usage of proof types.
- If inadequate, or no Color Guidance is received, the responsibility of the Print Divisions is to utilize Measured Print and produce a product that is within GRACoL specifications for Print Characteristics (i.e. ink density, dot gain, print contrast).

## **COLOR PALETTES**

- If a color palette is provided for press guidance, we recommend a Level One proof, as per the "Color Guidance Identification".
- Please include only the colors that are being used in the project.
- The colors used should be represented by at least two-inch squares, with the process color values printed under them.
- We ask that the major elements be identified as to which color on the palette they represent.
- We also request that you prioritize your two or three most important tints and or elements in case there are unavoidable compromises on press (i.e. first priority, second priority etc.).

## **MORE INFORMATION**

If you would like more information about this issue, contact your customer service representative.