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| Smyth-Bedford Label and File Specifications | | |

1.0 Purpose

To provide customers and label design firms specifications and guidance necessary to ensure the desired outputs are consistently achieved.

2.0 Scope

These specifications apply to all labels designed and/or printed at Smyth-Bedford.

3.0 Responsibilities

Customer Service Project Managers, Sales Account Managers, and PrePress Associates are responsible for assisting in the broad communication of these specifications to the parties affected.

4.0 Definitions

None

5.0 Specifications

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File Transfer Specifications

Media Accepted

- CD-ROM
- DVD-ROM

FTP Upload / Asset Management

Web uploads and asset/order management at www.smythco.com.

Please contact Customer Service for a login.

Contacts

Contact information must be supplied with each file submitted. For assistance, please contact Customer Service prior to shipping files and/or proofs.

Native Supplied File Specifications

File Formats Accepted

- Adobe Creative Suite 3
- Quark Express
- Freehand
- Photoshop

Fonts

Printer fonts and screen fonts must be included with all native art files. Adobe Type 1, or Open Type, True Type, and Multiple Master fonts can be accepted. Fonts from quality foundries are recommended for best results. Stylizing fonts should be avoided, as output can be unpredictable.

Image Requirements

- High Resolution CMYK images (minimum 300 dpi)

Type and Rules

- Reverse type – 5.5 bold face minimum
- Reverse type out of more than one color
 - 7 pt. bold block type / 9 pt. roman block type
 - 8 pt. bold serif type / 10 pt. roman serif type
- Positive type – 4.5 regular face minimum
- Reverse rules out of one color - .5 pt.
- Reverse rules out of more than one color – 1 pt.
- Positive rules – .25 pt.

Bleed

- Square cut – .062" bleed required on each side (total .125" height and width)
- Die cut – .125" bleed required on each side (total .25" height and width)

Borders / Copy to Trim Tolerances

- All copy must be .125" from trim and lap
- Borders, graphics and artwork must be .125" from trim
- **Beverage Cup In-Mold Label-Injection (IML-I)** must have .187" copy and border clearance from cut line

Die Cut

Please request die lines and die numbers from your Customer Service Representative prior to design development.

UPC Specifications

- Minimum Size 80%
- BWR (Bar Width Reduction) is .0006" or 15 microns
- Quiet zone should be 1/32" larger than UPC
- Truncation should not exceed 50%.

- Minimum percentage of reflectance – 32% (difference between bar code and background)
- Cyan should not be used as a barcode background color
- Please supply prefix number along with 10-digit UPC code if we are to create UPC codes for you.

Optimyser Supplied Files (7 color print process)

- Our optimizer process consists of four-color process plus Orange, Green and Blue (Reflex Blue).
- Typically, CT's should be scanned or supplied as CMYK and line work should be built for six colors.
- Reflex blue usually prints as a solid.
- Create file with process colors plus Pantone colors. Smyth Companies, Bedford will convert to Optimyser 7-color process.

Press-Ready File Specifications

File Formats

PDF/X1a:2001, PDF/X3:2002

- One job per file.
- PDF/X1a can be used with most jobs.
- PDF/X-3 may be required for some duotones and special effects.
- Must be a single composite page, not separated gray pages.
- All files **must** have a varnish regardless of coating specification.
- Vector versions must be used when available.
- JPEG Compression should not be used
- Down-sampling must be disabled
- Compression such as LZW, Flate, or RLE is recommended.
- If only raster screened data is available (TIFF/IT or copy-dot), please contact customer service.
- Files must be **trapped**.
- **Do not** turn on Separation All or Spot Color All for any color in the PDF.
- Varnish should be set to "multiply" not "overprint".
- Must be cropped to the bleed size of the label.

***** DCS Files are no longer accepted**

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** To take advantage of the Optimyser Program CTP ready files must be PDF/X1a files. The Spotless technology is only compatible with PDF/X1a files.*

Color Naming Specifications

- Process and Optimyser colors should be named: Cyan, Magenta, Yellow, Black, Orange, Green, and Blue.
- All PANTONE color names should correspond with the PANTONE library: PANTONE 123 C, PANTONE Red 032 C.
- Dark Blue should be named: Dark Blue.
- Varnish should be: Defined as a spot color, named Varnish, set to multiply.
** PDF files created from ArtPro – Varnish should be overprinted.*
- Die line or time should be: Defined as a spot color, named Die, set to overprint.
- White ink used on metallized jobs should be named Spot White.
- Perf line should be: Defined as a spot color, named Perf, set to overprint.
- Customer specific colors: please contact your customer service representative for proper naming of custom colors.

Proofing

Files must be submitted with a contract proof. Proof must be submitted within 24 hours if file is submitted electronically. Smyth Companies - Bedford will not assume responsibility for proofreading or verifying separations or composites.

Changes/Modifications

Making alterations to submitted files is not the responsibility of Smyth Companies - Bedford. Any changes that are made by Smyth Companies - Bedford to bring the file up to specifications may incur an additional charge.

Charges

There is a \$75.00 handling and archive fee for each file submitted. Additional charges may apply if submitted files are not within specifications and modifications are done by Smyth Companies - Bedford to bring them into specification.

Liability

Smyth Companies – Bedford will output and print files as submitted. Smyth Companies – Bedford assumes no liability for UPC scanability, content or printability due to file construction.

Supplied Press-Ready File Checklist

| | | | | | | | | | | | |
|---|-----|-------------|--|----------------|------------|--|-----------------------------------|-----------|--|--|--|
| Date: | | | | | | This form MUST be filled out for every file submitted | | | | | |
| Media: | CD: | | FTP: | | File Name: | | | | | | |
| Location: | | | | | | | | | | | |
| Access Information: | | | | | | | | | | | |
| Contact: | | | | | | | | | | | |
| Contact Phone Number: | | | | | | | | | | | |
| Packer: | | | | | | | | | | | |
| Brand: | | | | | | | | | | | |
| UPC Code: | | | | | | | | | | | |
| Label Trim Size | | Horizontal: | | | | | | Vertical: | | | |
| Label Bleed Size (Canvas Size) | | Horizontal: | | | | | | Vertical: | | | |
| Lap Information: | | | | | | | | | | | |
| Colors (Must follow Smyth color naming conventions) | | | | | | | | | | | |
| <u>Process Colors</u> | | | <u>Varnish</u> <small>(All files must have Varnish)</small> | | | | <u>Pantone and Special Colors</u> | | | | |
| Yellow Magenta Cyan Black | | | Varnish | | | | | | | | |
| Straight Cut | | Die Cut | | Backside Print | | | | | | | |
| Paper | | Metalized | | Synthetic | | Type | | | | | |
| Contract Proof Supplied? | | | Yes | | | | | No | | | |

Offset Print Process

Numbers of colors for one-pass printing

Smyth Companies – sheet-fed has the following offset printing equipment at our disposal:

➤ **Two Komori 640s**

- 6 color printing units. Usually 5 colors + varnish. One of these is equipped with aqueous coating

➤ **Komori 840 RP**

- 8 color printing units. Reverse printing unit. Aqueous coating unit. This press is usually configured to run 7 colors + varnish, or aqueous coating. Reverse printing in one color if required

➤ **Mitsubishi 15000**

- 8 color printing units. Aqueous coating unit. This press is usually configured to run 7 colors + varnish or aqueous coating

➤ **Mitsubishi 3000-LX**

- 8 color printing units. Tower coating unit. This press is usually configured to run hybrid UV inks, UV coating and synthetic stocks

➤ **Komori 844**

- 8 color printing units. Aqueous coating unit. This press is usually configured to run hybrid UV inks, synthetic stocks and C1S stocks

➤ **Heidelberg SM74-8P+L**

- 8 color printing units. Aqueous coating unit. 20x29inch small format press.
This press can also print 4 over 1.

Combination Printing

Combination sheets are considered 4 process colors, our combination dark blue and varnish. Should your product require a Pantone or custom color, please contact your Customer Service Representative.

Coatings

- Press varnish
- Aqueous coating
- UV coating is available

Ink Down Sequence

- 1) Black

- 2) Cyan
- 3) Magenta
- 4) Yellow

Line Screen

150 Line Screen

Color Balance Control System

Spectrophotometry

Color Measurement Tools

X-Rite IntelliTrax Spectrophotometry System

Maximum Density

320% for paper (C1S and Metallized)

250% for synthetics

C1S Print Specifications

| VALUE | DOT AREA | CYAN | DOT AREA | MAGENTA | DOT AREA | YELLOW | DOT AREA | BLACK |
|--------------|-----------------|---------------|-----------------|----------------|-----------------|---------------|-----------------|---------------|
| scale | CYAN | D-Gain | MAGENTA | D-Gain | YELLOW | D-Gain | BLACK | D-Gain |
| 5% | 12% | 7% | 12% | 7% | 11% | 6% | 13% | 8% |
| 10% | 18% | 8% | 18% | 8% | 19% | 9% | 20% | 10% |
| 15% | 28% | 13% | 28% | 13% | 28% | 13% | 30% | 15% |
| 20% | 35% | 15% | 35% | 15% | 34% | 14% | 36% | 16% |
| 25% | 40% | 15% | 40% | 15% | 39% | 14% | 41% | 16% |
| 30% | 47% | 17% | 47% | 17% | 45% | 15% | 47% | 17% |
| 35% | 52% | 17% | 52% | 17% | 52% | 17% | 54% | 19% |
| 40% | 60% | 20% | 60% | 20% | 60% | 20% | 62% | 22% |
| 45% | 66% | 21% | 66% | 21% | 65% | 20% | 68% | 23% |
| 50% | 72% | 22% | 72% | 22% | 70% | 20% | 74% | 24% |
| 55% | 74% | 19% | 74% | 19% | 72% | 17% | 76% | 21% |
| 60% | 76% | 16% | 76% | 16% | 75% | 15% | 78% | 18% |
| 65% | 80% | 15% | 80% | 15% | 80% | 15% | 82% | 17% |
| 70% | 85% | 15% | 85% | 15% | 85% | 15% | 86% | 16% |
| 75% | 88% | 13% | 88% | 13% | 88% | 13% | 90% | 15% |
| 80% | 92% | 12% | 92% | 12% | 90% | 10% | 93% | 13% |
| 85% | 94% | 9% | 94% | 9% | 93% | 8% | 95% | 10% |
| 90% | 96% | 6% | 96% | 6% | 95% | 5% | 97% | 7% |
| 95% | 98% | 3% | 98% | 3% | 99% | 4% | 99% | 4% |

Bleed Specifications

Packer supplies label dimensions. Smyth Companies - Bedford does not specify label dimensions, however we will coordinate this with the packer to facilitate the process by supplying templates and die lines for existing sizes.

Straight Cut Labels

Straight cut labels require a .062" bleed on each side for all label sizes (.125" total height and width).

Laps for Straight Cut Labels

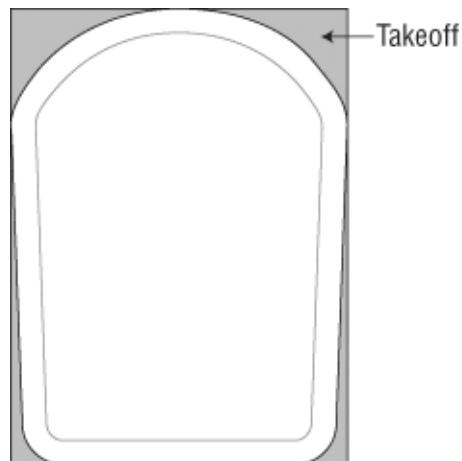
Color must extend into the lap .25" top and bottom. Balance of lap should remain unprinted for glue application. Live text must remain 1/8" away from lap area. Exceptions are for universal lap, which may have full color extended to the bleed on both sides.

Die Cut Labels

Die Cut Labels require a .125" bleed on each side (.25" total height and width). Die lines should be requested in advance from our Customer Service Representatives

Take off for Die Cut Labels printing on In-Mold stock

In order to produce work to tolerances needed for in mold labeling requirements, it is necessary to fill the voids on die cut labels with color. If the void area on the file nets over 1 square inch, a screen value of 35% per color up to 4 colors of the lightest coverage inks is preferred. (See diagram below)



Label Storage Recommendations

Smyth recommends that labels be stored in the following manner to ensure the best machineability results over time;

- First-In, First-Out
- 55-65% relative humidity
- 60-80°F
- Banded with chipboard on bottom
- Shrink-Filmed
- In Cases
- No direct sunlight
- No stacked loads

Labels subjected to adverse conditions and/or held in inventory for greater than one-year should be fanned and inspected prior to use.

6.0 Records

Supplied Press Ready File Checklist is maintained by the Customer Service Project Manager within the customer files.

7.0 Revisions

The Document Control Coordinator must create an Adobe .pdf for all issued revisions and submit it to Corporate IT Department for posting on www.smythco.com.

09/17/08: Rev. 9- move from BCSF 029 to PW procedures. Complete re-write.

8.0 References

N/A