

Artwork Specification Guidelines

This document addresses the most common questions associated with producing good quality, camera-ready artwork for flexographic printing on plastic films. Flexo printing on plastic films is much different than either offset or rotogravure flexographic printing on paper stock (common in the adhesive label industry) due to the complexities involved in working with a “stretchable” substrate. If you wish to do your own artwork (or have it produced by a local artist), we recommend using the following guidelines to reduce the risk of a poor print job.

ART-COMPUTER DISC

If providing artwork which was produced on a computer system, please provide a specification sheet to help us decipher your disc. (i.e., file names, MAC or PC format, fonts, etc.). We also request that you include a hard copy print out with the disc and the name of the software program used to create the art (including version number). With the disc art, it is also critical that the trapping is done properly to prevent adjustment.

ART-COMPUTER DISC (RECEIVED)

We can receive 3.5’ floppies, zip 100 discs, CD and DVD, and via the internet. (See section called **ART-MODEM** below for instructions to send art via the internet.) Please supply any electronic art in Macintosh format whenever possible.

Software (Macintosh) can be any of the following: Adobe Illustrator 8.0, 9.0, CS, CS2; Adobe Photoshop 5.0, CS; Quark XPress 5.0, 6.1; and Freehand 8.0.

***Please note: we are primarily an Illustrator prepress house.

PC Format – if possible, save art as Adobe Illustrator, EPS, TIFF’S, or PCX formats. Always provide at least a printout for reference, and indicate what fonts are used where. Include on the disc any other linked or embedded EPS’S, TIFF’S, PICT’S, etc. that are used.

ART-MODEM

If you would like to send electronic art via the internet, this section describes the proper procedure. 1) Access the internet. 2) Send an e-mail to info@sharppackaging.com and attach the file. If the file is in Mac format, it should be ok to compress it if necessary. If the file is in PC format, please do not compress it. Please send all files in separate e-mails and include all EPS’S, PIC’S, TIFF’S, fonts, etc. Please call your sales representative to tell him or her that you are sending art via the internet. Also, fax over a copy of the art, indicating what fonts are used where.

ART DISTORTION

Please allow Sharp Packaging to do the distortion of your artwork.

BACKUP COLOR

Please keep in mind, we are printing on a clear substrate, which prevents us from matching a PMS color unless white is used as a backup to add opacity to the inks. If a PMS color match is required, then a white backup is also required. Printing on a white substrate, such as white opaque film, will eliminate the need to print a white backup

color. The white backup color is counted as one in the printing process and in our bag and sleeve label quotations.

**BORDERS/
OUTLINES**

1/32" or 2.25 points, is the minimum width for borders and outlines. If two or more colors are trapped together with an outline or a border, a minimum of 1/16" or 4.5 points, width should be used.

**COLOR
COMPARISONS**

The same color printed by different methods and on different substrates will appear to be different because of light absorption or reflectance. Color comparisons will also be affected by the quality and type of light in which the colors are previewed. For all critical color matches, the samples should be viewed under balanced, color corrected light, in an environment of neutral reflecting surfaces. We use fluorescent light with a white background when matching colors.

**COLOR
REGISTRATION**

For colors that are not supposed to trap (such as type and a different color underline), a minimum of 1/32" margin must be left between the two elements for proper registration. Also, see section called COLOR TRAPPING.

**COLOR
SEPARATION**

Avoid knockout text through screens or process work that does not have a solid outline around the letters. Also, avoid putting any positive printing text in more than one color.

**COLOR
TRAPPING**

When two colors are butting together, the minimum trap (overlap) area is 1/32" or 2.25 points. Always trap the darker color over the lighter color. Do not trap more than three colors together.

NEGATIVES

All negatives must have a minimum density of 4. If providing negatives, DuPont matte film is recommended. If provided negatives are for a wrap around printed item, call Sharp's Art Department to setup films with proper bleeds.

Surface Printing: Wrong Reading, Emulsion Side Down

Reverse Printing: Right Reading, Emulsion Side Down

Negatives must be packed between cardboard in an envelope to prevent damage. If negatives have creases, wrinkles, or scratches in them, plates will not be produced properly, and negatives will have to be remade. When supplying negatives, please supply a color proof for reference, that will accompany the job to press.

Negatives must have the proper distortion for your press cylinders. Please call Sharp's Art Department for proper cylinder distortion.

**NET WEIGHT
REQUIREMENTS**

Net weight requirements are based on the square inches of the Principle Display Panel (PDP).

- Not less than 1/16" in height on packages with a PDP of 5 square inches or less.
- Not less than 1/8" in height on packages with a PDP of more than 5 but not more than 25 square inches.
- Not less than 13/16" in height on packages with a PDP of more than 5 but not more than 100 square inches.
- Not less than 1/4" in height on packages with a PDP of more than 100 square inches.
- Not less than 1/2" in height on packages with a PDP of more than 400 square inches.

The letter height pertains to upper case. If upper and lower case are used, the lower case "o" shall meet the standard height. If a fraction is used, each component numeral shall meet one-half of the minimum height standard.

Net Weights must appear in the bottom 30% of the panel. It shall be separated from all other printed information above and below by a space equal to the height of the letters used and a space twice the width of the letter "N" on either side of the declaration.

PROCESS COLOR/ SCREENING

Process of full color images, such as illustrations or photographs, can be achieved by two to six color process printing. It is important to keep these "tonal" colors separate from the line colors on a design, as much as possible, to maximize the quality of reproduction. Process printing is created by using screens up to a maximum of 100 line count.

A typical tonal range of halftone and process printing is 10% to 80% of a color. The quality of the submitted art will determine the final quality of the separations.

There should be an additional 20% cut back to allow for ink retention in the printing plates during the printing process. We cannot go lower than a **7% dot** for **SCREEN** printing, or lower than a **5% dot** for **PROCESS** printing.

Whenever possible, avoid printing large areas of color and fine details, such as fine type, screen tints, and halftones, on the same printing plate. In many cases, if a printing deck is open, it is better to separate such items and treat them as two separate colors. Furthermore, it is best not to supply artwork that has screens printing over other screens.

TYPE SIZES

For positive printing text, the minimum type size is 6 points. For reverse (or dropout) printing text, the minimum type size for a SANS SERIF font is 8 points, in BOLD face. The minimum type size for a SERIF font is 10 points, in BOLD face. The minimum type size for a SCRIPT font is 12 points, in BOLD face. However, it is best to avoid serif fonts and script fonts for reverse or drop text.

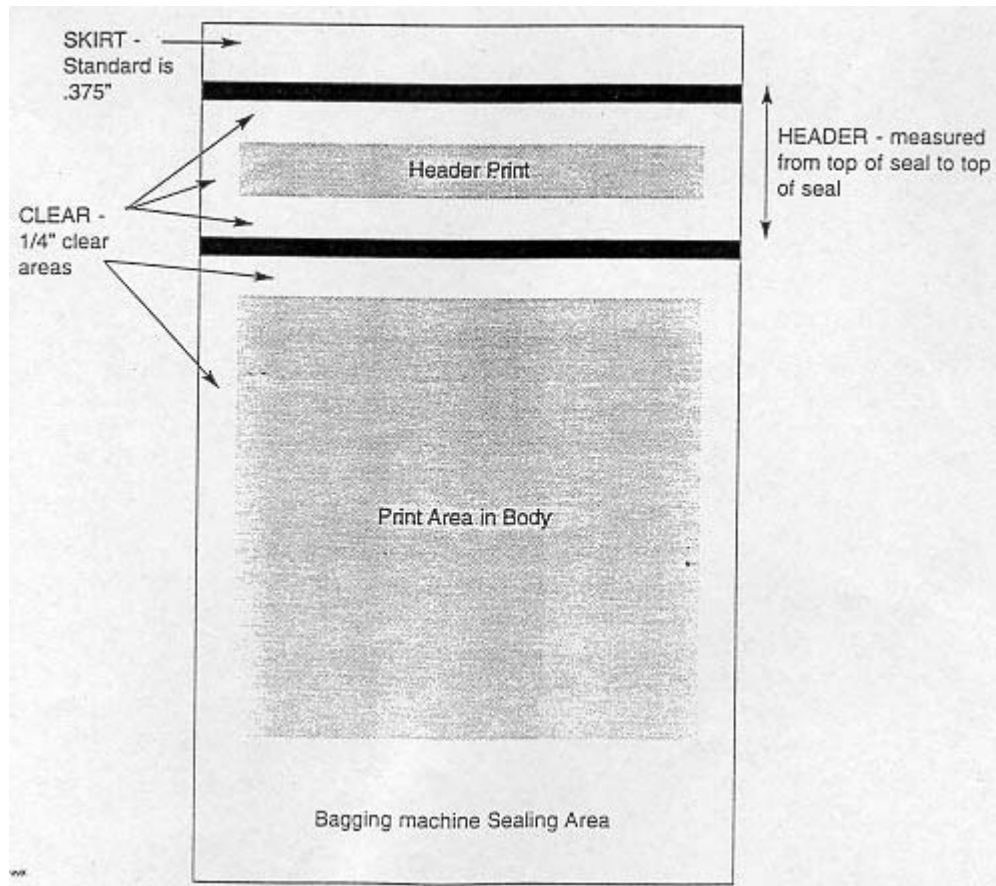
UPS'S/BAR CODES

1. UPC's and bar codes are very difficult to print flexographically and have to meet very critical specifications to ensure success. A magnification of 80% is the minimum, with a recommendation of 100% or larger. A Bar Width Reduction of .004 should be used to insure printing within allowable tolerances.
2. A 100% UPC, version A or version E, can be truncated to a minimum of 5/8" tall. Anything smaller than 100% is not recommended. Our absolute minimum UPC size is 80%.
3. ALL UPC LINES SHOULD RUN IN THE LENGTHWISE DIRECTION (machine direction). This will prevent poor print jobs due to a 'washboard' effect which horizontal lines create.
4. Due to a shortage of numbers, The Uniform Code Council added two new system digit numbers to the standard UPC format. This resulted in the first digit of the UPC, which was formerly always a zero, now being a 6 or 7. It is very important to include this number when providing UPC information.
5. Please also indicate the bar code format to be used. (i.e. UPC, code 3 or 9, HIBC, code 128, etc.)
6. PLEASE NOTE: UPC CODE ARTWORK SHOULD NOT BE DISTORTED LIKE THE OTHER ART DISTORTION.
7. To get a UPC or a barcode assigned for your product(s), please call the Universal Code Council in Dayton, OH at (937) 435-3870.

EZ-BAGS® (See drawing below)

1. PRINT LOCATION IS MEASURED FROM THE PRIMARY SEAL.
2. Print should be kept a minimum of 1/4, from primary seal.
3. Print should be kept a minimum of 1/4, from side seals.
4. Printed blocks on the back of a bag should be a total of 1/8" smaller in width than a corresponding block on the front. (this prevents seeing back print through the front).
5. Print should be kept a minimum of 1-1/2" from the open end of the bag to allow for sealing.
6. For white opaque back/clear front combination bags which are printed on BOTH sides, please allow a minimum of 1/2" clearance from side seals.

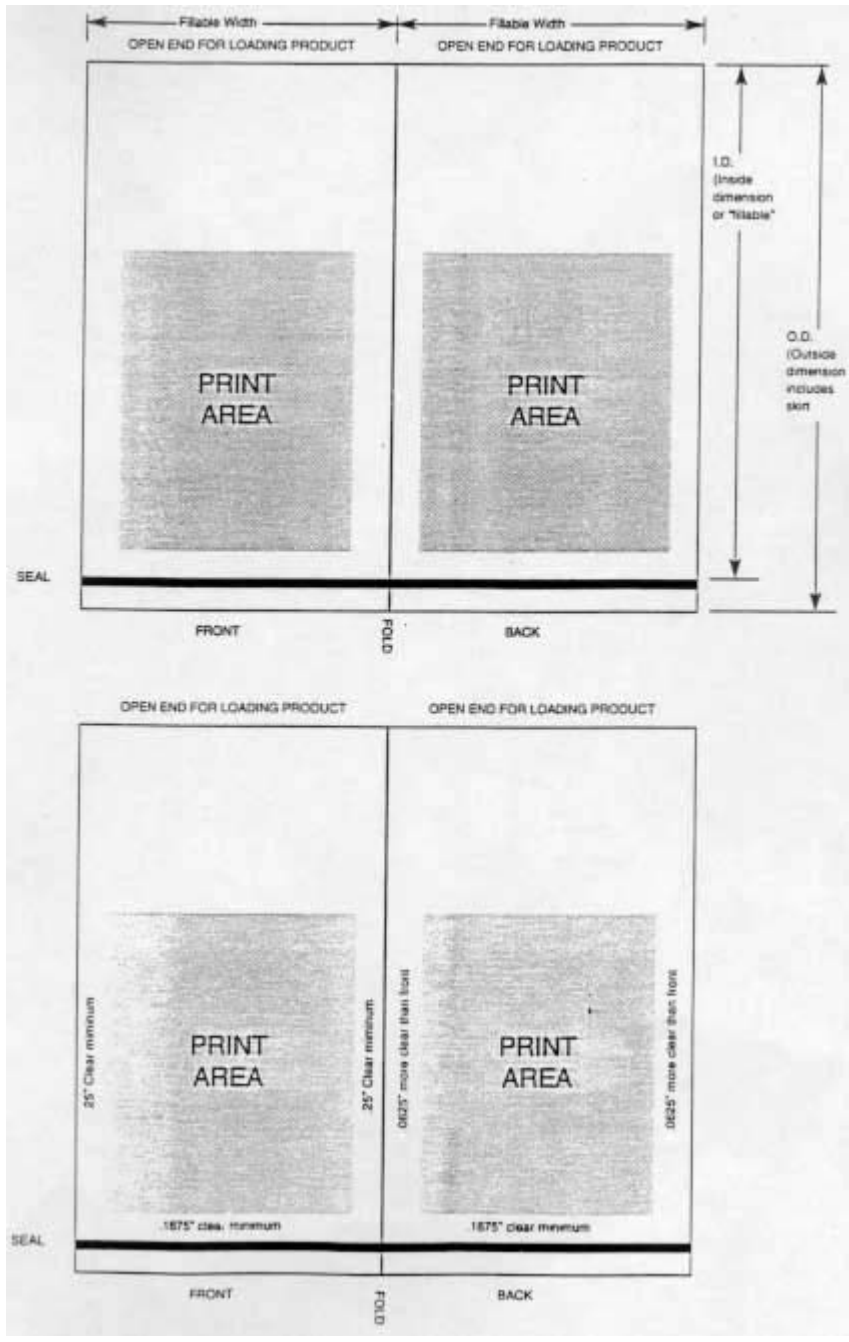
SPECIAL NOTE: In some applications, printing can be extended to the edges of the bag (width direction) or can be extended through a header seal. This requires the use of special inks in the printing process and other unique considerations. If this is desired, please contact your sales representative for further information.



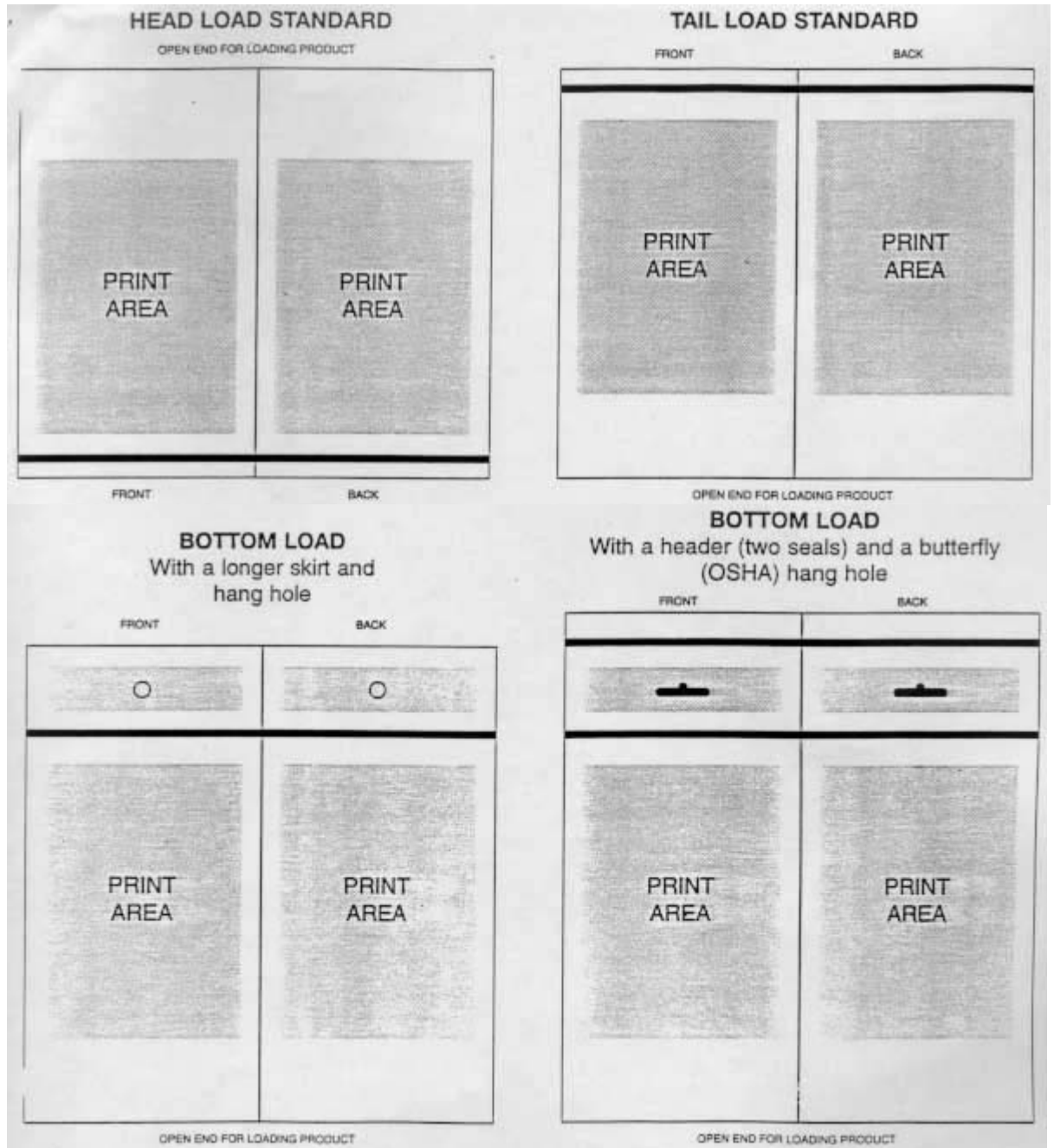
GRAPHICS LAYOUTS

We've shown the layout as if both front and back of the bag are printed. You do not have to print both sides of the bag. If you are only printing one side of the bag, see the FRONT diagram for size and layout.

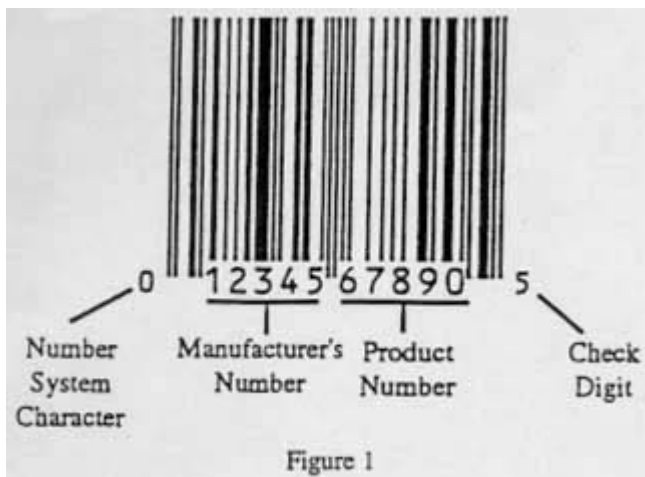
If both sides have relatively the same size printed areas from side to side, we require that the left and the right side on the back be brought in a minimum of 1/16" (1/8" total). This will help eliminate seeing the back through the front. (See **EZ-BAGS**® section).



LOAD SPECIFICATIONS



UPCs



These four types of information are defined below and are illustrated in Figure 1.

Number System Character - A single digit that is assigned by the Uniform Code Council and serves to categorize the product. A complete listing of the possible Number System Characters is given in Figure 2.

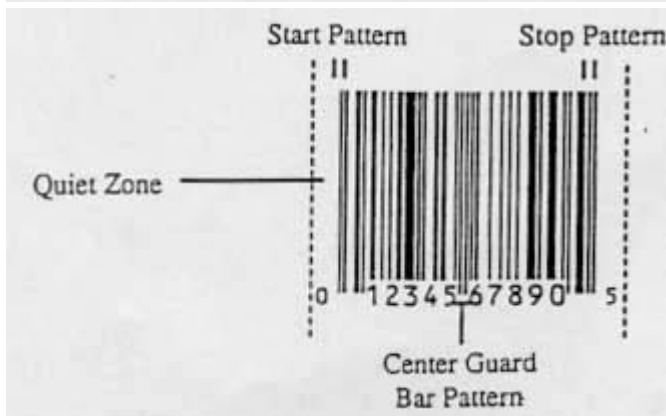
Manufacturer Identification Number - A five-digit number that is also assigned by the Uniform Code Council and works in conjunction with the Number System Character to uniquely identify the manufacturer.

Product Identification Number - A five digit number that is assigned by the manufacturer to uniquely identify each product.

Check Digit - A data security device that is derived from a mathematical calculation of the prior eleven digits in the symbol.

- | | |
|-----|--|
| 0,7 | Used for regular retail items and also is required for the UPC-E |
| 2 | Used for variable weight items such as meat and produce |
| 3 | Used for National Drug Codes and National Health Related Items Codes |
| 4 | Used for in-store marking |
| 5 | Used for UPC-A marking on coupons |
| 6,7 | Used for regular retail items and for industrial applications |

Figure 2



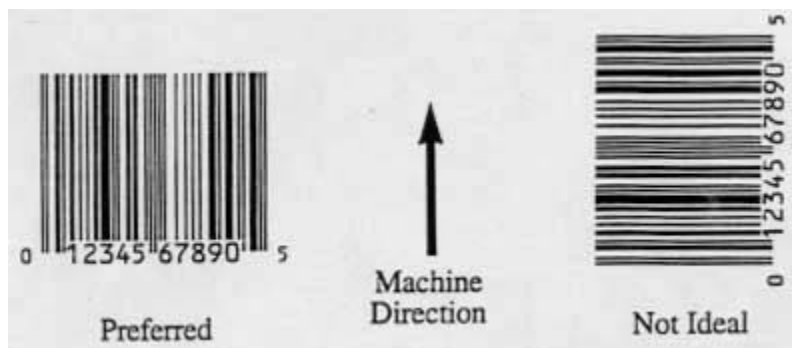
HIBC

(HEALTH INDUSTRY BAR CODE)

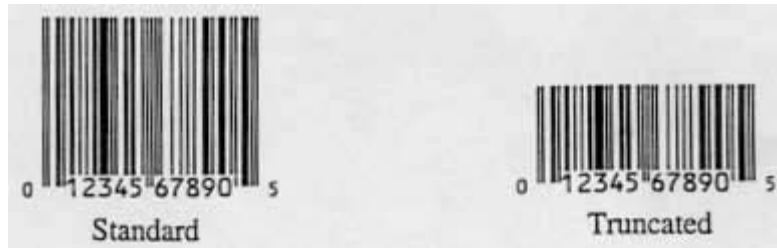


PRODUCTION & QUALITY ISSUES

- “Best” printed in machine direction



- “Best” to avoid truncation



- “Best” colors are dark inks (except red) on a white block
- “Best” positioned on bottom 1/3 or package in a central location



Example of UPC with border (bearer)