## 301 Physical Standards

1.0 Physical Standards for Flats<br>2.0 Physical Standards for Nonautomation Flats<br>3.0 Physical Standards for Automation Flats

### 1.0 Physical Standards for Flats

### 1.1 General Definition of Flat Size Mai

Flat-size mail must have the following characteristics:
a. Be more than 11-1/2 inches long, or more than 6-1/8 inches high, or more than $1 / 4$ inch thick, other than automation flats under 3.0 or as allowed for Standard Mail pieces with simplified addresses under 2.2.2.
b. Be not more than 15 inches long or more than 12 inches high or more than $3 / 4$ inch thick, except for:

1. Periodicals flats mailed under 707.26 . 0
2. Polywrapped flats, with selvage that extends beyond the contents, up to a maximum length of 15-3/4 inches. The enclosed contents must not be longer than 15 inches. Also see 1.5.3.
c. Be rectangular with four square corners or with finished corners that do not exceed a radius of 0.125 inch ( $1 / 8$ inch). See Exhibit 1.1c.

Exhibit 1.1c Maximum Corner Radius for Flat-Size Mailpieces

Corner Radius Maximum 1/8"
$\downarrow$

Graphic at 100\%
Place mailpiece against
template to test accuracy
d. Be categorized as a catalog, if meeting the standards in 1.9.
e. Other size or weight standards may apply to mail addressed to certain APOs and FPOs, and mail sent by the Department of State to U.S. government personnel abroad.

### 1.2 Length and Height of Flats

The length of a flat-size mailpiece is the longest dimension. The height is the dimension perpendicular to the length. When determining the maximum height or length of a flat, include any selvage of polywrap material that may enclose the piece. When determining the minimum height or length of a flat, do not include the selvage of any polywrap material that may enclose the piece. Also see 1.5.3.

### 1.3 Minimum Flexibility for Flat-Size Pieces

Flat-size pieces must be flexible. Boxes - with or without hinges, gaps, or breaks that allow the piece to bend - are not flats. Tight envelopes or wrappers that contain one or more boxes are not flats. At the customer's option, customers may perform the following test on their own mailpieces. When a postal employee observes a customer demonstrating that a flat-size piece is flexible according to these standards, the employee should not perform the test. Test flats as follows:
a. All flats (see Exhibit 1.3a):

1. Place the piece with the length parallel to the edge of a flat surface and extend the piece halfway off the surface.
2. Press down on the piece at a point 1 inch from the outer edge, in the center of the piece's length, exerting steady pressure.
3. The piece is not flexible if it cannot bend at least 1 inch vertically without being damaged.
4. The piece is flexible if it can bend at least 1 inch vertically without being damaged and it does not contain a rigid insert. No further testing is necessary.
5. Test the piece according to 1.3 b or 1.3 c below if it can bend at least 1 inch vertically without being damaged and it contains a rigid insert.

## Exhibit 1.3a Flexibility Test-All Flats


b. Flats 10 inches or longer that pass the test in 1.3a and contain a rigid insert (see Exhibit 1.3b):

1. Place the piece with the length perpendicular to the edge of a flat surface and extend the piece 5 inches off the surface.
2. Press down on the piece at a point 1 inch from the outer edge, in the center of the piece's width, exerting steady pressure
3. Turn the piece around and repeat steps 1 and 2. The piece is flexible if both ends can bend at least 2 inches vertically without being damaged.

Exhibit 1.3b Flexibility Test-Flats 10 Inches or Longer

c. Flats less than 10 inches long that pass the test in 1.3a and contain a rigid insert ( see Exhibit 1.3c):

1. Place the piece with the length perpendicular to the edge of a flat surface and extend the piece one-half of its length off the surface.
2. Press down on the piece at a point 1 inch from the outer edge, in the center of the piece's width, exerting steady pressure.
3. Turn the piece around and repeat steps 1 and 2. The piece is flexible if both ends can bend at least 1 inch vertically without being damaged.

Exhibit 1.3c Flexibility Test-Flats Less Than 10 Inches Long


### 1.4 Uniform Thickness

Flat-size mailpieces must be uniformly thick so that any bumps, protrusions, or other irregularities do not cause more than 1/4-inch variance in thickness. When determining thickness, exclude the outside edges (1 inch from each edge) when the contents do not extend into those edges. Also, exclude the selvage of any polywrap covering (see 1.5) from this determination. Mailers must secure nonpaper contents to prevent shifting of more than 2 inches within the mailpiece if shifting would cause the piece to be nonuniformly thick or result in the contents bursting out of the mailpiece. (see 601.3.3).

### 1.5 Polywrap Coverings

### 1.5.1 Polywrap Films and Similar Coverings

Mailers using polywrap film or similar material on flat-size mailpieces (except pieces mailed at high density, high density plus, or saturation prices) must use a product meeting the standards in 1.5. Film approved for use under 1.5.4 must meet the specifications in Exhibit 1.5.1 as follows:
a. If the address label is affixed to the outside of the polywrap, the haze property (property 2) does not apply.
b. Only products listed as approved on the USPS RIBBS Web site (http://ribbs.usps.gov) may be used on flat-size mailpieces.

Exhibit 1.5.1 Polywrap Specifications
Mailers who polywrap flats, except for saturation and high density pieces, must use polywrap that meets all of the properties in this exhibit, except under 1.5.1b.

| PROPERTY | REQUIREMENT | TEST METHODS IN USPS T-3204 | COMMENT |
| :---: | :---: | :---: | :---: |
| 1. Kinetic Coefficient of Friction, MD |  |  |  |
| a. Film on Stainless Steel with No. 8 (Mirror) Finish | <0.45 | USPS-T-3204 <br> Section 4.5.2 |  |
| b. Film on Film | 0.20 to 0.55 | USPS-T-3204 <br> Section 4.5.1 |  |
| 2. Haze | <70 | USPS-T-3204 <br> Section 4.5.3 | Affixing address labels to outside of polywrap is an alternative to meeting this requirement. |
| 3. Secant Modulus, $1 \%$ elongation |  |  |  |
| a. TD | >50,000 psi | USPS-T-3204 <br> Section 4.5.4 |  |
| b. MD | >40,000 psi | USPS-T-3204 <br> Section 4.5.4 |  |
| 4. Nominal Gauge | $>0.001$ in | USPS-T-3204 <br> Section 4.5.5 |  |
| 5. Static Charge | $<2.0 \mathrm{kV}$ | USPS-T-3204 <br> Section 4.5.7 |  |
| 6. Blocking | <15 g | USPS-T-3204 <br> Section 4.5.6 | To be conducted at $140\left( \pm 3.6^{\circ}\right)$ degrees Fahrenheit. |

### 1.5.2 Wrap Direction and Seam Placement

Wrap direction, seam direction, and seam placement must follow these standards:
a. The wrap direction must be around the longer axis (parallel to the length) of the mailpiece, with the seam parallel to that axis.
b. The polywrap over the address area must be a smooth surface to avoid interference with address and barcode readability. The preferred seam placement is on the nonaddressed side of the mailpiece. If the seam is placed on the addressed side, the seam must not cover any part of the address and barcode, postage area, or any required markings or endorsements.

### 1.5.3 Overhang

For purposes of the polywrap standards for overhang (selvage) only, the top edge of the mailpiece is one of the two longer edges of the piece. Any polywrap selvage must meet these standards:
a. When the mailpiece contents are totally positioned at the bottom of the polywrap, the overhang must not be more than 0.5 inch at the top of the mailpiece.
b. When the mailpiece contents are totally positioned to the left or to the right side of the polywrap, the overhang must not be more than 1.5 inches on the opposite side.
c. The polywrap covering must not be so tight that it bends the mailpiece.

### 1.5.4 Polywrap Certification Process for Manufacturers

Specification USPS-T-3204, Test Procedures for Polywrap Films describes exact test procedures and acceptable values for polywrap film characteristics. Independent testing laboratories may certify products for manufacturers who do not have the facilities or experience to conduct each of the test procedures. The specification includes a list of laboratories experienced in conducting these tests. Customers may obtain the test procedures by contacting USPS Engineering (see 608.8.1 for address) or on the USPS RIBBS Web site (http://ribbs.usps.gov).

Manufacturers must submit a letter, on their letterhead, indicating the value for each of the specifications in 1.5.1 for each polywrap film, to USPS Mailing Standards (see 608.8.1 for address). When the USPS receives the letter or certificate of conformance from an approved lab, films that meet the standards will be listed on http://ribbs.usps.gov. Manufacturers should follow this process before submitting the certification letter:
a. Test each film according to procedures listed in USPS-T-3204, Test Procedures for Polywrap Films.
b. Test each surface treatment separately. Manufacturers or approved labs may test the thinnest film of one product with identical surface treatment and characteristics. If the thinnest film meets the characteristics after being tested, the USPS will list the product as approved for all gauges of that product that also meet the gauge test.

### 1.6 Maximum Deflection for Flat-Size Mailpieces

Flat-size mailpieces must meet maximum deflection standards. Flat-size pieces mailed at high density, high density plus, or saturation prices, and flats mailed at basic carrier route prices entered by the mailer at destination delivery units (DDUs), are not required to meet these deflection standards. Test deflection as follows:
a. For pieces 10 inches or longer (see Exhibit 1.6a):

1. Place the piece on a flat, straight-edge surface with the length perpendicular to the edge of the surface and extend the piece 5 inches off the edge of the surface. Test square-shaped bound flats by placing the bound edge parallel to the edge.
2. Place a flat 12-inch ruler (or other similar flat object 12 inches or longer) on top of the mailpiece with the length of the ruler parallel to the edge of the surface and as close to the edge as possible so that the 5-pound weight (see 1.6a3) does not extend past the edge.
3. Place a certified 5-pound weight on the center of the ruler to hold the piece in place.
4. Determine the vertical deflection in inches.
5. Turn the piece around 180 degrees and repeat the process.
6. The piece is mailable as a flat if it does not droop more than 3 inches vertically at either end.

## Exhibit 1.6a Deflection Test-Pieces 10 Inches or Longer


b. For pieces less than 10 inches long (see Exhibit 1.6b):

1. Place the piece on a flat, straight-edge surface with the length perpendicular to the edge of the surface and extend the piece one-half of its length off the edge of the surface. Test square-shaped bound flats by placing the bound edge parallel to the edge.
2. Place a flat 12 -inch ruler (or other similar flat object 12 inches or longer) on top of the mailpiece with the length of the ruler parallel to the edge of the surface and as close to the edge as possible so that the 5 -pound weight (see 1.6b3) does not extend past the edge.
3. Place a certified 5 -pound weight on the center of the ruler to hold the piece in place.
4. Determine the vertical deflection in inches.
5. Turn the piece around 180 degrees and repeat the process.
6. The piece is mailable as a flat if it does not droop more than 2 inches less than the extended length at either end. For example, a piece 8 inches long would be extended 4 inches horizontally off a flat surface. It must not droop more than 2 inches vertically at either end.

Exhibit 1.6b Deflection Test-For Pieces Less Than 10 Inches Long

1.7 Flat-Size Pieces Not Eligible for Flat-Size Prices

Flat-size mailpieces that do not meet the standards in 1.3 through 1.6 must pay applicable higher prices as noted in either 1.7a or 1.7b below.
a. Flat-size pieces that do not meet flexibility, uniform thickness, or polywrap standards in 1.3 through 1.5 must pay these applicable prices:

1. First-Class Mail—parcel prices.
2. Periodicals-parcel prices.
3. Standard Mail-parcel prices.
4. Bound Printed Matter—parcel prices.
b. Flats that do not meet deflection standards in 1.6 must pay the applicable prices as noted in Exhibit 1.7b. Under the column heading "eligibility as presented," flats will be considered to be presented as automation flats only if they meet all other eligibility standards for automation flats.

| FIRST-CLASS MAIL AUTOMATION |  |
| :---: | :---: |
| Eligibility as presented | Eligibility with failed deflection |
| Automation 5-digit flat | Presorted flat |
| Automation 3-digit | Presorted flat |
| Automation ADC | Presorted flat |
| Automation MADC | Presorted flat |
| FIRST-CLASS MAIL PRESORTED (nonautomation) |  |
| Eligibility as presented | Eligibility with failed deflection |
| Presorted flat | Single-piece flat or presorted parcel |
| PERIODICALS OUTSIDE COUNTY |  |
| Piece price eligibility as presented | Piece price eligibilty with failed deflection |
| Basic Carrier Route flat, if not entered at a DDU | Machinable 5-digit flat |
| Machinable barcoded 5-digit flat | Nonmachinable barcoded 5-digit flat |
| Machinable barcoded 3-digit flat | Nonmachinable barcoded 3-digit flat |
| Machinable barcoded ADC flat | Nonmachinable barcoded ADC flat |
| Machinable barcoded MADC flat | Nonmachinable barcoded MADC flat |
| Machinable nonbarcoded 5-digit flat | Nonmachinable nonbarcoded 5-digit flat |
| Machinable nonbarcoded 3-digit flat | Nonmachinable nonbarcoded 3-digit flat |
| Machinable nonbarcoded ADC flat | Nonmachinable nonbarcoded ADC flat |
| Machinable nonbarcoded MADC flat | Nonmachinable nonbarcoded MADC flat |
| Nonmachinable barcoded or nonbarcoded flat | Price claimed, if otherwise eligible |
| PERIODICALS IN-COUNTY |  |
| Piece price eligibility as presented | Piece price eligibility with failed deflection |
| Basic Carrier Route flat, if not entered at a DDU | Nonautomation (or automation, if barcoded) 5-digit flat |
| Automation 5-digit flat | Nonautomation 5-digit flat |
| Automation 3-digit flat | Nonautomation 3-digit flat |
| Automation basic flat | Nonautomation basic flat |

## STANDARD MAIL

| Eligibility as presented | Eligibility with failed deflection |
| :--- | :--- |
| Basic Carrier Route flat, if not entered <br> at a DDU | Nonautomation 5-digit flat |
| Automation 5-digit flat | Nonautomation 5-digit flat |
| Automation 3-digit flat | Nonautomation 3-digit flat |
| Automation ADC flat | Nonautomation ADC flat |
| Automation MADC flat | Nonautomation MADC flat |
| Nonautomation flat (all sort levels) | Nonautomation MADC flat |
|  | Eligibility with failed deflection |
| BOUND PRINTED MATTER | Carrier Route parcel |
| Eligibility as presented | Presorted parcel |
| Carrier Route flat, if not entered at a DDU | Presorted parcel |
| Barcoded presorted flat | Price as claimed, if otherwise eligible |
| Nonbarcoded presorted flat |  |

### 1.8 Labels, Stickers, and Release Cards

### 1.8.1 Use

A label, sticker, or release card may be placed on a flat-sized mailpiece. Standard Mail flats with a label, a sticker, or a release card must meet additional standards in 343.2.5. These attachments may be:
a. A label or sticker less than 0.007 inch thick, other than repositionable notes affixed under 705.22.0, as follows:

1. A permanent label or sticker (designed not to be removed or relocated) affixed directly to the outside of the mailpiece with permanent adhesive.
2. A relocatable label, to be placed on the outside of, or on the contents of, a reply mailpiece. Labels must be affixed under 1.8.2 or 1.8.3.
b. Up to two release cards, each at least 0.007 inch thick and no more than 0.012 inch thick, when affixed according to 1.8.4 and 1.8.5.
c. On pieces mailed at First-Class Mail, Periodicals, Standard Mail, or Package Services prices, only if permitted by the applicable content and eligibility standards.

### 1.8.2 Pressure-Sensitive Label

Any pressure-sensitive label or sticker affixed directly to a mailpiece before mailing must have a minimum peel adhesion to stainless steel of 8 ounces/inch. This standard does not apply to pressure-sensitive labels provided by the USPS to mailers to label bundles for sortation levels.

### 1.8.3 "Sandwich" Label

A face stock/liner label ("sandwich" label) is a two-part unit with a face stock (top label) attached to a liner (bottom label) affixed to the mailpiece. The face stock must have a peel adhesion value of at least 2 ounces/inch with respect to the liner label and at least 8 ounces/inch when reapplied to stainless steel.

### 1.8.4 Flats with Attached Release Cards

Mailings of flat-size mailpieces with a release card attached to the outside of each piece must include 8 pieces, as part of the mailing, addressed to "USPS Engineering - Flat Mail Technology" with the attention line: "Release Card Sample", using the street address in 608.8.1. Flat-size mailpieces, with up to two attached release cards, must be between 6 and 12 inches (inclusive) high, between 8 and 15 inches (inclusive) long, between 0.02 and 0.75 inch (inclusive) thick as mailed, and meet the following conditions:
a. All flats must be at least 6 inches high, at least 8 inches long, and at least 0.02 inch thick. In addition, nonautomation and carrier route flats must have at least one dimension larger than one maximum letter-size dimension. A flat with two attached release cards must have a minimum cover thickness of 0.003 inch.
b. Enveloped flats must be made of paper with a minimum 60-pound book grade paper.
c. Window envelopes must have only one closed panel address window.
d. Bound flats must have a cover with a minimum thickness of 0.003 inches.
e. Release cards must meet the standards in 1.8.5.

### 1.8.5 Standards for Release Cards

One or two release cards, each at least 0.007 inch thick and no more than 0.012 inch thick, may be attached to the same side of a flat-size mailpiece, and also must:
a. Be rectangular, but allowed with finished corners having a radius of at least $1 / 8$ inch up to $1 / 2$ inch.
b. Be between 2 and $2-1 / 2$ inches high, and between 3 and $3-1 / 2$ inches long. A card may be affixed with either edge parallel to the length of the mailpiece.
c. Be affixed by machine to ensure adequate adhesion. Manually affixed attachments are not allowed.
d. Be affixed, on the address side of the mailpiece, a minimum of 4 inches from the bottom of an enveloped or card-type mailpiece or from the binding of a bound flat and must not interfere with the readability of the address, barcode, or postage information. Maintain a clear space of at least $1 / 4$ inch from all other edges when a release card is on the address side. Maintain a clear space of at least $1 / 4$ inch from all edges when a release card is on the nonaddress side of a mailpiece.
e. Be affixed to a liner (backing) and meet the following adhesion standards:

1. Adhesive used to affix the backing to the mailpiece must have a peel adhesion of at least 2 pounds/inch to stainless steel with a 20 minute dwell time at 300"/minute at 90 degrees per ASTM test D3330F.
2. Adhesive used to attach the release card to the backing must have a peel adhesion of at least 1.5 ounces/inch to stainless steel with a 30 minute conditioning time, at 300"/minute at 90 degrees per ASTM test D3330F.

### 1.9 Catalogs

1. A catalog is a bound flat-sized mailpiece with at least 16 pages, meeting the criteria in 1.0. Catalogs provide a listing of products offered for sale arranged systematically and includes images, photographs or illustrations of the products, descriptive details, and prices. Catalogs must contain an order form, a phone number, or a web address to place orders and provides shipping options for the products offered for sale.

### 2.0 Physical Standards for Nonautomation Flats

### 2.1 First-Class Mail

These additional standards apply to First-Class Mail flat-size pieces:
a. First-Class Mail flats cannot exceed 13 ounces. First-Class Mail flats weighing more than 13 ounces are Priority Mail.
b. Flat-size pieces that do not meet the standards in 1.1 through 1.4 must be prepared as parcels and pay the applicable parcel price.

### 2.2 Standard Mail

### 2.2.1 Basic Physical Standards

These additional standards apply to Standard Mail flat-size pieces:
a. Each piece must weigh less than 16 ounces.
b. Flat-size pieces that do not meet the standards in 1.3 through 1.5 must be prepared as parcels and pay the parcel prices.

### 2.2.2 Dimensions for Standard Mail Flats with Simplified Addresses

Standard Mail flats with simplified addresses for which saturation flats prices are paid and EDDM-Retail flats (see 140) must have at least one dimension that is greater than a letter-size maximum dimension as noted in 1.1a. The minimum thickness must be at least 0.007 inch up to a maximum of 0.75 inch. As an exception to the minimum length, flats with simplified addresses may have a length shorter than a letter-size maximum length, under all of the following conditions:
a. The length must be greater than 10.5 inches up to a maximum 15 inches.
b. The height must be at least 3.5 inches up to a maximum height of 12 inches, but the height must be no greater than the length.
c. If the piece is also entirely within letter-size dimensions under 201; the piece must bear an "EDDM" marking directly after the "ECRWSS" marking required in 302.3.2.1c.
d. When the piece is mailed as part of a saturation flats mailing under applicable conditions in 602.3.2.
e. Letter-size pieces that meet the size standards in 2.2a and 2.2b and that are addressed to rural routes may be mailed as letters or flats with simplified addresses at the mailer's option.

### 2.2.3 Cover Page and Protective Cover

If the piece is not completely enclosed in a mailing wrapper, then any protective cover or cover page must cover both the front and back of the host publication and extend to within at least $3 / 4$ inch of the edge opposite the fold or binding. Exception: Flat-size pieces may have short covers as provided in 3.4.2.

### 2.3 Bound Printed Matter

### 2.3.1 General Standards

These additional standards apply to Bound Printed Matter:
a. Flat-size pieces that do not meet the standards in 1.3 through 1.4 must be prepared as parcels and pay the applicable parcel prices.
b. Bound Printed Matter may not weigh more than 15 pounds.
c. Two or more flats may be mailed as a single piece if they are about the same size or shape or if they are parts of one article, if they are securely wrapped or fastened together, and if they do not together exceed the weight or size limits.

### 2.4 Media Mail

### 2.4.1 General Standards

These additional standards apply to Media Mail:
a. Flat-size pieces that do not meet the standards in 1.3 through 1.4 must be prepared as parcels.
b. No piece may weigh more than 70 pounds.
c. Two or more flats may be mailed as a single piece if they are about the same size or shape or if they are parts of one article, if they are securely wrapped or fastened together, and if they do not together exceed the weight or size limits.

### 2.5 Library Mail

### 2.5.1 General Standards

These additional standards apply to Library Mail:
a. Flat-size pieces that do not meet the standards in 1.3 through 1.4 must be prepared as parcels.
b. No piece may weigh more than 70 pounds.
c. Two or more flats may be mailed as a single piece if they are about the same size or shape or if they are parts of one article, if they are securely wrapped or fastened together, and if they do not together exceed the weight or size limits.

### 2.6 Priority Mail Express, Priority Mail, and Critical Mail Flats

Mailers are encouraged, but not required to design and produce Priority Mail Express and Priority Mail flat-size pieces under the general standards in 1.0 and the automation standards in 3.0. Critical Mail flat-size pieces (see 323) that do not meet
the standards for flats in 1.0 and 3.0 are not eligible for Critical Mail flats prices, but are eligible for Priority Mail Commercial Plus Flat Rate Envelope prices (volume thresholds apply).

### 3.0 Physical Standards for Automation Flats

### 3.1 Basic Standards for Automation Flats

Flat-size pieces claimed at automation prices must meet the standards in 1.0 and in 3.0, and the eligibility standards for the class of mail and price claimed. For automation flats, the size standards in 3.2 supersede the size standards in 1.1.

### 3.2 Additional Criteria for Automation Flats

### 3.2.1 Shape and Size

Each flat-size piece must be rectangular, except that flat-size mailpieces may have finished corners that do not exceed a radius of 0.125 inch (1/8 inch). See Exhibit 1.1c. The following minimum and maximum dimensions apply to First-Class Mail, Standard Mail, Periodicals (except under 707.26.0), and Bound Printed Matter pieces:
a. Minimum height is 5 inches. Maximum height is 12 inches.
b. Minimum length is 6 inches. Maximum length is 15 inches, except for polywrapped flats as allowed in 1.1.
c. For bound or folded pieces, the edge perpendicular to the bound or folded edge may not exceed 12 inches.
d. Minimum thickness is 0.009 inch. Maximum thickness is 0.75 inch.

### 3.2.2 Maximum Weight

Maximum weight limits are as follows:
a. For Critical Mail, 13 ounces.
b. For First-Class Mail, 13 ounces.
c. For Periodicals, 20 ounces.
d. For Standard Mail, less than 16 ounces.
e. For Bound Printed Matter, 20 ounces.

### 3.3 Prohibitions

### 3.3.1 Protrusions

Clasps, strings, buttons, or like materials, or other protrusions that impede or damage mail processing equipment are prohibited.

### 3.3.2 Staples

Staples must not be substituted for tabs or wafer seals on pieces in automation price mailings. As a binding method, staples may be placed in the fold or spine of a magazine or booklet-type or similar mailpiece if parallel with the bound edge, tightly and securely inserted, and not protruding to damage or interfere with mail processing equipment.

### 3.4 Tabs, Wafer Seals, Tape, and Glue

### 3.4.1 General

Although not required, mailpieces may be prepared with tabs, wafer seals, cellophane tape, or permanent glue (continuous or spot) if these sealing devices do not interfere with the recognition of the barcode, price marking, postage information, and delivery and return addresses. Cellophane tape may not be placed over the barcode or where any part of the barcode will be printed. Tabs or seals placed in the area on which any part of the barcode is printed must contain a paper face meeting the standards for background reflectance. Tabs, wafer seals, and tape must have a peel adhesion (shear strength) value of at least 15 ounces/inch at a speed of 12 inches/minute after application to a stainless steel plate; the test is to be conducted 10 minutes after the material is applied to the plate.

### 3.4.2 Short Covers

Flats may be prepared with a cover page or protective cover that is more than $3 / 4$ inch from each edge if the cover page is secured with at least two tabs, wafer seals, or glue spots placed within 1 inch of the top and bottom edges of the cover page or protective cover.

### 3.5 Uniformity and Exterior Format

### 3.5.1 General

A flat-size mailpiece prepared and claimed at automation prices must be uniformly thick (see 1.4). Each flat-size mailpiece must have a smooth and regular shape and be free of creases, folds, tears, or other irregularities not compatible with automation equipment. The exterior surface must not have protuberances caused by prohibited closures; attachments (except as provided below); irregularly shaped or distributed contents; or untrimmed excess material from the envelope, wrapper, or sleeve.

### 3.5.2 Outside Attachment

Except as allowed under 1.8, an attachment to a flat-size mailpiece must be a single sheet, the same size as the cover. The attachment must be permanently, securely, and uniformly affixed to the front or back cover along a bound, folded, or otherwise closed edge, except as allowed under 1.8. Pieces claimed at a Periodicals price may bear attachments only if permitted by the applicable standards.

### 3.5.3 Booklet-Type Piece or Magazine

The contents of flat-size mailpieces prepared in sleeves or other wrappers must be sufficiently secure in the sleeve or wrapper to stay in place during processing. If material bearing the delivery address or barcode for the mailpiece is enclosed in a partial wrapper, that wrapper must be sufficiently secure to prevent the contents from shifting and obscuring the delivery address or barcode.

