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UNITED STATES POSTAL SERVICE SPECIFICATION

SIGNATURE		DATE	 UNITED STATES POSTAL SERVICE® LABELS, TRAY AND SACK, BARCODED, 24-DIGIT, INTELLIGENT MAIL (MAILER USES)		
REVIEWED BY	M. Forna	05/15/08			
CHECKED BY	D. Hamilton	05/16/08			
APPROVED BY	D. Boller	05/16/08			
PROJECT ENGINEER	D. Hamilton	05/16/08			
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FOR THE UNITED STATES POSTAL SERVICE		05/16/08	Cage No. 27085	USPS-L-3216	SHEET 1 OF 35
S. Dearing					

1 SCOPE

1.1 Scope – This specification contains the requirements for the preparation of 24-digit barcoded tray, flat tub, and sack Intelligent Mail® Tray Labels (IM™ Tray Label) to be used for distribution processing within the U.S. Postal Service.

This document is a guide for mailers that provide barcoded labels on trays, flat tubs, and sacks of mail, and software vendors associated with the production of these barcoded labels so that the trays and sacks may be processed within postal facilities using the appropriate automated handling equipment.

Note: *Mail cannot be tendered with the pure 24-digit IM Tray label until May 2009. Manufacturers and providers of software that will be capable of producing the pure 24-digit IM Tray label must warn their users that they cannot use the pure 24-digit labels for production mailings until May 2009.*

1.2 Background – As the Postal Service continues to automate mail processing, the business need for strict adherence to a standardized tray and sack label has become imperative. Mail processing automation initiatives rely heavily on tray and sack labels to provide necessary mail processing and customer related information. Unfortunately, the Postal Service's legacy 10-digit tray and sack barcode label format does not uniquely identify the handling unit. The IM™ Tray label is a cross-functional business solution that expands the legacy 10-digit tray and sack label format by adding data elements that will not only continue to support sortation and routing, but also establish a unique identifier on each label. The IM™ tray label formats provide unique identification of trays and sacks in addition to identifying the originator of the mail. These formats therefore require mailers to use Mailer IDs assigned by the Postal Service, utilize unique identifiers and maintain numeric serialization of these identifiers. Without the unique identifier, the potential benefits associated with in-transit visibility, manifest reconciliation, and automated mail acceptance are severely diminished. The use of the IM™ tray label will allow the Postal Service to more effectively and efficiently manage Postal Service operations.

1.3 Transition Strategy – This newly defined IM™ tray label program is seen as a long-term strategy, which ideally recommends the adoption of the pure 24-digit IM™ tray label format with a “one-time,” network-wide switchover. However, the transition from the legacy 10-digit tray and sack barcode label format to the 24-digit IM™ tray label involves two major areas. The first area is the conversion of all label production systems. The second area is the extensive conversion of all mail acceptance systems and material handling systems that currently scan the tray labels. While the Postal Service and mailing community get prepared to begin using the pure 24-digit IM™ tray label, the Postal Service has already implemented an interim label format - the transitional 10/24 Intelligent Mail tray label. This interim label format will be in use while the migration to the pure 24-digit IM™ tray label format is underway. The transitional 10/24-digit IM™ tray label format provides many of the additional data elements (and related benefits) associated with the 24-digit IM™ tray label without changing or negatively impacting standard operating practices.

Policy guidelines on the adoption and usage of the IM™ tray label formats shall be as stipulated in the Mailing Standards of the United States Postal service, Domestic Mail Manual - DMM® (DMM).

1.4 Classification – The IM™ tray label format for trays, sacks, and flat tubs provides the maximum amount of data for multiple postal operations by defining the label's content by mail flow. The mailer flow format is defined as:

- | | |
|---------------------------|---|
| Format 1. Mailer: | Customers (business mailers) providing mail to the Postal Service in mailer-generated trays and sacks |
| Format 2. Inter-facility: | Postal Service inter-facility tray, tub, and sack movement |
| Format 3. Intra-facility: | Internal plant-level processes that sort the mail (Postal Service intra-facility tray movement) |

The Inter- and intra-facility mail flows can be broken down into various label types representing specific processing flows, each having unique information requirements. However, two IM™ tray label types have been developed in support of Format 1, the Mailer Flow. One that allows for Customers that use a 6-digit Mailer ID, and a second one that allows for the use of a 9-digit Mailer ID.

These types have been defined as:

- Type 1 – 6-digit Mailer ID Customer-to-Postal Service
- Type 8 – 9-digit Mailer ID Customer-to-Postal Service

The Mailer IDs for Customers will be managed and coordinated by the PostalOne! Program Management Office.

1.5 Use of the Technical Specification – This specification provides all the necessary information for mailers to generate Postal Service-compliant tray, flat tub, and sack labels for use within the Postal Service. Within the context of this document the use of the term tray label refers to trays, flat tubs, and sack labels. The specification has been divided into logical categories to simplify its use. Sections 3.1 through 3.3 define the type of paper, resolution and printing tolerances that shall be used. Section 3.4 contains the general formatting guidelines for the tray labels. Section 3.5 addresses the content of the labels and defines field dimensions and content for the 24-digit IM™ tray label format respectively for both Label Type 1 (6-digit Mailer ID) and Label Type 8 (9-digit Mailer ID). Section 3.6 provides the barcode technical requirements.

Note: Mail cannot be tendered with the pure 24-digit IM Tray label until May 2009. Manufacturers and providers of software that will be capable of producing the pure 24-digit IM Tray label must warn their users that they cannot use the pure 24-digit labels for production mailings until May 2009.

The Mailing Standards of the United States Postal Service, Domestic Mail Manual (DMM) provides the official guidelines on the mailing standards associated with the use and production of the barcoded labels presented by mailers. However, this technical specification shall be the basis for all other technical guidance on the IM™ tray labels.

2 APPLICABLE DOCUMENTS

2.1 Government Documents – The following documents form part of this specification to the extent specified herein.

MANUALS

United States Postal Service

DMM 300	Mailing Standards of the United States Postal Service, Domestic Mail Manual
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(Copies of the DMM may be obtained from the Superintendent of Documents, U.S. Government Printing Office , 732 N Capitol St., NW, Washington DC 20401-0003 or at their website at www.gpoaccess.gov); and or available on Postal Explorer at website <http://pe.usps.gov>).

2.2 Non-Government Documents – The following documents of the most current issue available form a part of this specification to the extent specified herein.

SPECIFICATIONS

Automatic Identification Manufacturers (AIM)

ANSI/AIM BC2	Uniform Symbology Specification Interleaved 2 of 5
ANSI/AIM BC4	International Symbology Specification Code 128

(Copies of AIM documents may be obtained from the Automatic Identification Manufacturers, Inc; 634 Alpha Drive; Pittsburgh, PA 15238, or by visiting their web site at <http://www.aimi.org>)

American National Standards Institute (ANSI)

INCITS 182	Information Systems - Barcode Print Quality – Guideline
ISO/IEC 15416	Information Technology – Automatic Identification and Data Capture Techniques – Barcode Print Quality Test Specification – Linear Symbols (formerly INCITS 182)

(Copies of ANSI documents may be obtained by writing to Global Engineering Documents, Attn: Customer Service Department, 15 Inverness Way East, Englewood, CO 80112, or by visiting their web site at <http://global.ihs.com>; requests for permission to reproduce ISO documentation should be addressed to ISO at the following address or to ISO's member body in the country of the requestor: Copyright Manager, ISO Central Secretariat, 1 rue de Varembé, Case postale 56, CH-1211 Geneva 20, Switzerland, or by visiting their web site at http://www.iso.org/iso/publications_and_e-products.htm for more information).

2.3 Order of Precedence – In the event of conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3 REQUIREMENTS

3.1 Label Paper Stock – Barcoded tray and sack labels shall be printed on white, manila or pink (for Periodicals) card stock 1.860 to 2.015 inches high by 3.250 to 3.515 inches wide. Label paper stock standards as specified in Appendix A shall be adhered to for each label.

3.2 Printer Resolution – Dots per inch (dpi) is a measure of printing resolution, in particular the number of individual dots of ink a printer or toner can produce within a linear one-inch (2.54 cm) space. A printer with a minimum dpi of 203 is required for printing the IM™ tray labels.

3.3 Printing Tolerances – A minimum print margin of 0.0625 inch shall be maintained all around the label. Figure 1 illustrates the print area dimensions on the tray label.

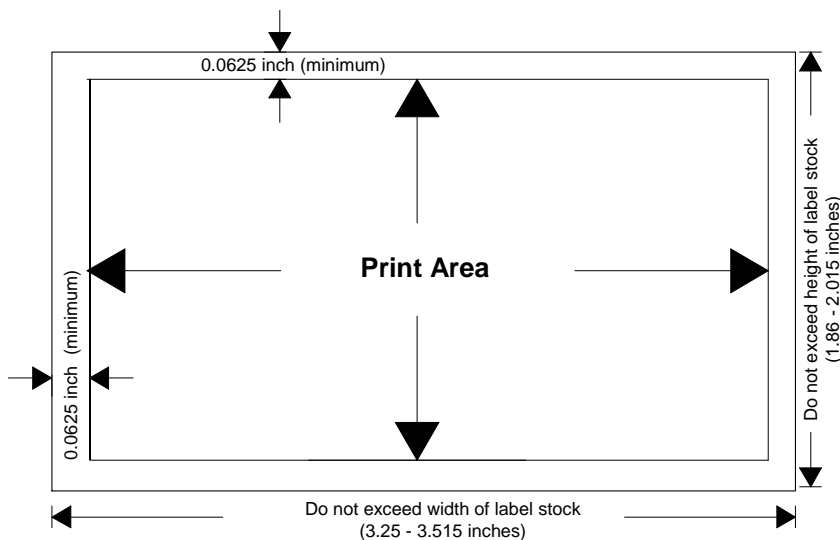


Figure 1. Print Area

The label layouts in the following sections shall be measured from the print area edge, not the label stock edge. All measurements from the print area shall have the print tolerance added to the dimension to calculate the field's distance from the label stock edge.

3.4 General Label Format – The core data elements for the identified Format 1 mail flow, Mailer-to-USPS, which includes both Type 1: 6-digit Mailer ID Customer to Postal Service and Type 8: 9-digit Mailer ID Customer to Postal Service labels are as follows:

- a. Printer Line
- b. Tray or Sack Destination (Postal Destination Name)
- c. Content Identifier Number (CIN) description (tray or sack content)
- d. Office of mailing or mailer information (Office where the mail was received or the name of the mailer)
- e. Destination ZIP Code (the ZIP Code of the tray or sack's final destination)
- f. Carrier Route Information
- g. Mailer ID (unique identifier of the mailer)
- h. 24-digit, ISS 128 subset C barcode numeric line
- i. Mailer's Area (set aside for mailer generated human readable information)

Each label format contains the core human-readable data along with additional required human-readable elements. The table below shows the human-readable data items for the Mailer Label Types

Table I. Human-Readable Data

Human-Readable Data	24-Digit Mailer Format
Core Human-Readable Items	Printer's Line
	Postal Destination
	CIN Description†
	Mailer's Name
	Destination ZIP Code
	Barcode Numeric Line
Additional Human-Readable	Carrier Route

Items	Mailer ID
	Mailer's Area

* Shaded areas indicate both human-readable and encoded barcode data

† The CIN numerical representation is encoded in the barcode, not the text description

Though specific font sizes are listed throughout these specifications, font support may vary significantly from printer to printer. In general, the font selection used shall be of an Optical Character Recognition (OCR) quality. All human-readable letters and numerals shall be printed with a sans serif font type. Sans serif refers to a category of typefaces that do not use serifs, small lines at the ends of the characters. Popular sans serif fonts include Helvetica, Avant Garde, Arial, and Geneva. Label fields shall not be printed with serif fonts, which include Times Roman, Courier, and Palatino. All human-readable letters and numerals must be easy to read with no run-on letters or numerals. The character spacing other than where explicitly specified can be proportional with respect to the type of font used. The text in fields other than in the Printer Line field and the Mailer's Area shall be printed in uppercase letters.

Note: No additional extraneous information other than the information required in these specifications shall be placed anywhere else on the label, unless pre-approved on a case-by-case test basis by USPS Engineering.

3.5 24-digit Mailer Tray Label: Data Field Layouts (Label Type 1 and Label Type 8) – All data field dimensions given below are measured from the upper left origin of the print area (not the label edge) and have a variance of ± 0.003 inch. Figure 2 shows all the fields found on a general mailer label with the 24-digit IM™ Tray Label format.

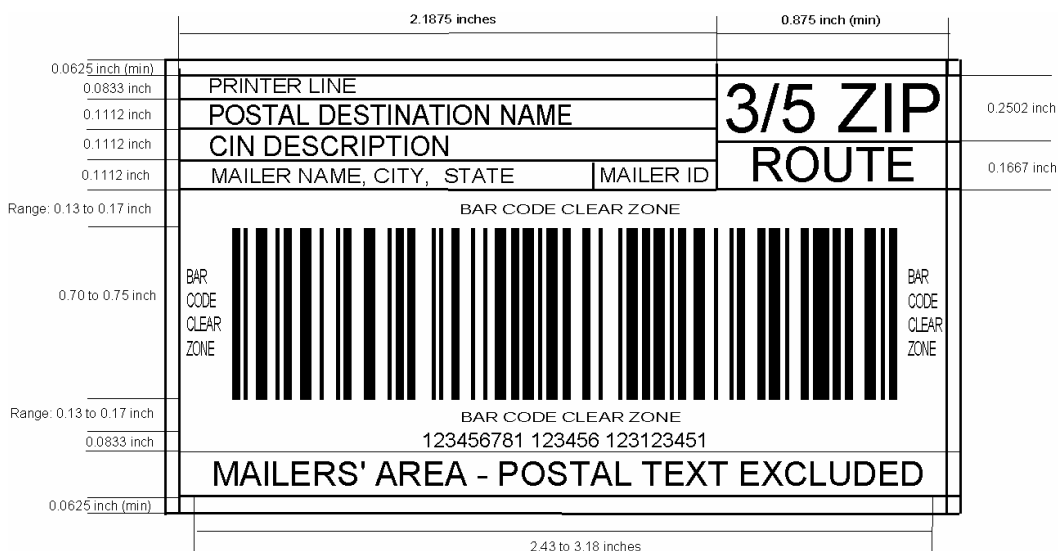


Figure 2. General Mailer 24-digit IM™ Tray Label Format

3.5.1 Printer Line – The Printer Line field is an optional field at the top of the label that allows the mailer, the printing agency or label production system to print extraneous information as specified in Table II. Labels printed at the Topeka Label Printing Center (LPC) shall contain information associated with the label order.

Table II – Printer Line 24-digit Specifications

Type of Information	Specifications
Field name	Printer Line
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to 2.1875 inches from left print edge
Field y-dimension	Top print edge to 0.083 inch from top print edge
Field format	Left justified
Character Length	Not to exceed defined area
Font size	6-point type sans serif font

3.5.2 Postal Destination Name – The Postal Destination Name field contains the name of the postal location or city name associated with the Destination ZIP Code. This information shall be displayed below the Printer Line field, as specified in Table III. The Postal Destination Name must contain only the information required by the applicable standards for the class, processing category, sortation level of the tray or sack, and the rates claimed. This information is contained in the labeling lists for all sortation and rate levels except trays and sacks to carrier route, 5-digit carrier routes, merged 5-digit, and 5-digit destinations, and except for automation letter trays to 5-digit scheme destinations. For the destination line of carrier route, 5-digit carrier routes, merged 5-digit, and 5-digit trays and sacks, the city, two-letter state abbreviation, and 5-digit ZIP Code of the destination 5-digit ZIP Code area must be shown. For 5-digit scheme trays, the city, two-letter state abbreviation, and ZIP Code for the destination scheme must be obtained from the City State Product. The destination line may contain abbreviated city and state information if such abbreviations are those in the City State Product.

Table III – Postal Destination Name 24-digit Specifications

Type of Information	Specifications
Field name	Postal Destination Name
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to 2.1875 inches from left print edge
Field y-dimension	0.083 to 0.195 inch from top print edge
Field format	Left justified
Character Length	22 (min)
Font size	8- 10 point type sans serif font

3.5.3 CIN Description – The CIN Description field shall display the exact text description associated with the content identifier number (CIN) that matches the class, processing category, and the sortation level of the contents of the tray as required by the applicable standards for the mailing. The CIN description field shall be displayed below the Postal Destination Name field as specified in Table IV. The reference for this information is the Mailer CIN list as listed in the latest publication of the DMM. A footnote at the end of the content line information in this published CIN list indicates that the appropriate referenced information must be added. The correct corresponding CIN numerical representation must be used in the barcode and the barcode numeric line on the label as specified in section 3.5.9.

Table IV – CIN Description 24-digit Specifications

Type of Information	Specifications
Field name	CIN Description
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to 2.1875 inches from left print edge
Field y-dimension	0.195 to 0.306 inch from top print edge
Field format	Left justified
Character Length	21 (min)
Font size	8 -10 point type sans serif font

3.5.4 Mailer Name – The Mailer Name field shall contain the city and state of the entry post office or the mailer’s name and the city and state of the mailer’s location. It shall be displayed below the CIN Description field as specified in Table V. The mailer’s name is the name of the business or organization that prepared the tray or sack label and its associated tray or sack. It is recommended that the mailer’s name also appears with the city and state of the entry post office. The city and state information may be abbreviated if such abbreviations are those in the City State Product.

Table V– Mailer Name 24-digit Specifications

Type of Information	Specifications
Field name	Mailer Name
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to 1.6875 inches from left print edge
Field y-dimension	0.306 to 0.417 inch from top print edge
Field format	Left justified
Character Length	21 (min)
Font size	6- to 8-point type sans serif font

3.5.5 Mailer ID - The assignment and management of Mailer IDs and associated information shall be administered by the PostalOne! Program Management Office.

3.5.5.1 Label Type 1 – The six-digit Mailer ID representation on Label Type 1 shall consist of a six-digit identification number assigned by the Postal Service to identify each mailer, i.e., the business or organization that prepared the tray or sack as specified in Table VI.

Table VI – 6-digit Mailer ID (MID) 24-digit Specifications

Type of Information	Specifications
Field name	Mailer ID
Mailer format	Label Type 1 (6-digit Mailer ID)
Field x-dimension	Right print edge to 0.46875 inch from right print edge
Field y-dimension	0.306 to 0.417 inch from top print edge
Field format	Left justified
Character Length	6

Font size	6- to 8-point type sans serif font
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3.5.5.2 Label Type 8 – The nine-digit Mailer ID representation on Label Type 8 shall consist of a nine-digit identification number assigned by the Postal Service to identify each mailer, i.e., the business or organization that prepared the tray or sack as specified in Table VII.

Table VII – 9-digit Mailer ID (MID) 24-digit Specifications

Type of Information	Specifications
Field name	Mailer ID
Mailer format	Label Type 8, (9-digit Mailer ID)
Field x-dimension	Right print edge to 0.46875 inch from right print edge
Field y-dimension	0.306 to 0.417 inch from top print edge
Field format	Left justified
Character Length	9
Font size	6- to 8-point type sans serif font

3.5.6 Destination ZIP – The Destination ZIP Code is the 3 or 5-digit ZIP Code for the tray or sack's destination, or the ZIP Code of the mail within the container and is specified as in Table VIII. Only the correct 3-digit ZIP Code prefix shall be printed when the required labeling for a tray includes only a 3-digit ZIP Code prefix; trailing zeros are not permitted.

Table VIII– Destination ZIP 24-digit Specifications

Type of Information	Specifications
Field name	Destination ZIP
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	2.1875 inches from left print edge extending up to the right edge
Field y-dimension	Top print edge to 0.2502 inch from top print edge
Field format	Centered
Character Length	5

Font size	18 -point type sans serif font
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3.5.7 Route – The Route field is the carrier route or post office (PO) Box section number of the final destination of the tray’s contents and is printed as specified in Table IX. Generally, the route shall consist of a 1-character descriptive prefix followed by a 3-digit route or PO Box section number. The prefixes are as follows:

- C = Carrier route
- G = General delivery
- H = Highway contract route
- B = Post office box section
- R = Rural route.

Table IX – Route 24-digit Specifications

Type of Information	Specifications
Field name	Route
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	2.1875 inches from left print edge extending up to the right edge
Field y-dimension	0.2502 to 0.4169 inch from top print edge
Field format	Centered
Character Length	4
Font size	12 -point type sans serif font

3.5.8 Auto – The Auto field indicates whether the mail in the tray is barcoded or not. This field shall contain the phrase “AUTO” if the mail is barcoded. These designations shall be printed in the same area on the label as the Route information as specified in Section 3.5.7

However, if both Route information and barcode status information are present, the Route information shall take priority, as specified in section 3.5.7. If neither Route nor barcode status (AUTO) information is available, this field shall be blank.

Table X - Auto 24-digit Specifications

Type of Information	Specifications
Field name	Auto
Inter-facility format	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension*	2.1875 inches from left print edge extending up to the right edge
Field y-dimension*	0.2502 to 0.4169 inch from top print edge
Field format	Centered
Character Length	4
Font size and type	12 - point type sans serif font

*Printed in same place as and in lieu of Route as specified in this section

3.5.9 24-digit Barcode Numeric Line – The 24-Digit Barcode Numeric Line is the numeric representation of the encoded 24-digit barcode data and is printed below the barcode clear zone as specified in Table XI. Appendix C provides details on the 24-digit barcode data values.

Table XI – 24-digit Barcode Numeric Line 24-digit Specifications

Type of Information	Specifications
Field name	Barcode Numeric Line
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to right print edge
Field y-dimension	Dependant on barcode clear zone; the field height is 0.083 inch starting just below the barcode clear zone
Field format	Centered under the barcode
Character Length	24
Font size	6- point type sans serif font

3.5.10 Mailer's Area – The Mailer's Area at the bottom of the label shall be reserved for extraneous information generated by mailers as specified in Table XII. No

other extraneous information generated by the mailer other than that printed in the Printer Line field shall be allowed on any other part of the label.

This extraneous information shall only appear in a rectangular area that begins just below the 24-digit barcode numeric line field and extends to the bottom print edge. Information in this area shall not encroach on the clear zone below the barcode or on the 24-digit barcode numeric line. Within this lower area, the information may extend across the label from the left print edge to the right print edge.

There are no font or size restrictions for information printed in this area. However, text that resembles any other postal generated fields such as a day of the week or a USPS air stop code may not be used in this area; the following text - AADC, ADC, SCF, 3 Digit, 5 Digit, Directs, Firm/ Firms, PO Box - shall be specifically excluded. This includes any abbreviations, alphabetical, or direct variations of these identifiers. Barcodes for a mailer's internal use may not be placed in this area or anywhere else on the label, unless pre-approved on a case-by-case test basis by USPS Engineering.

Table XII – Mailer's Area 24-Digit Specifications

Type of Information	Specifications
Field name	Mailer's Area
Mailer formats	Label Type 1 (6-digit Mailer ID) Label Type 8 (9-digit Mailer ID)
Field x-dimension	Left print edge to right print edge
Field y-dimension	Shall not encroach on barcode clear zone or on the 24-digit barcode numeric line; dependant on barcode height and clear zone, the field shall begin just below the 24-digit barcode numeric line field and shall extend to the bottom print edge.
Field format	Mailer dependant – shall not exceed field's area
Character Length	Mailer dependant – shall not exceed field's area
Font size	Mailer dependant (see exceptions in 3.5.10 above) – shall not exceed field's area

3.6 24-Digit Barcode Technical Requirements

3.6.1 Barcode Symbology – The 24-digit barcode shall be an ISS Code 128, subset C barcode prepared in accordance with ANSI/AIM BC4 and the information contained in this specification.

3.6.2 Placement – The barcode is required to be printed in accordance with the layout specifications provided in section 3.5 of this document. Required clear zones above, below, to the right, and to the left of the barcode shall be observed. Perforations are not permitted through the barcode and barcode clear zones on the labels.

3.6.3 Height – Barcodes shall be printed in accordance with the layout specifications provided in section 3.5 of this document. The height of the 24-digit ISS Code 128 barcode shall range from a minimum of 0.70 inch to a maximum of 0.75 inch.

3.6.4 Nominal Narrow Element Dimension (X Dimension) – The width of the narrow bar element and narrow space element is defined as the x-dimension. It shall be selected as a single dimension that shall be uniform within the barcode. The minimum x-dimension or narrow element width shall be 0.013 inch (13 mils) and the maximum shall be 0.017 inch (17 mils).

3.6.5 Barcode Clear (Quiet) Zone – Two clear zones shall be maintained, one to the left and one to the right of the barcode, each measuring at least 10 times the x-dimension and extending the full height of the barcode. Two additional clear zones shall be maintained, one above and one below the barcode for its full width, each measuring at least 10 times the x-dimension. The clear zones shall satisfy the space reflectance requirements.

3.6.6 Reflectance – When measured in the red spectral range between 630 nanometers (nm) and 675 nm, the minimum white bar (space) reflectance (Rs) shall be greater than 50 percent, and the maximum bar reflectance (Rb) shall be less than 25 percent. The minimum print reflectance difference (Rs - Rb) shall be greater than 40 percent. Reflectance shall be measured with a Postal Service-specified reflectance meter or barcode verifier.

3.6.7 Printing Tolerances – The barcode shall comply with section D1 (Dimensional Print Tolerances) of the ANSI/AIM BC4 requirements.

3.6.8 Quality – At least 70 percent of the barcodes in each mailing shall have an overall symbol grade of “B” or better when measured with measured with a 10 mil aperture (0.250 mm) in the red spectral range between 630 nanometers (nm) and 675 nm. The remainder can measure no less than a Symbol Grade of “C”. Specified symbol grades are based upon the ISO/IEC 15416 Barcode Print Quality Guideline (formerly INCITS 182) which recommends a method of measuring the quality parameters of printed bar code symbols.

For all printing processes, it is strongly recommended that the symbols be tested to ensure that they meet these specification requirements.

3.7 Barcode Content – The legacy 10-digit Postal Routing Barcode consists of 10-digits. These eight digits consist of the ZIP Code and the Content Identification Number (CIN) information. The 2-digit Postal Service Processing Code as currently used in the legacy 10-digit Postal Routing code shall now be defined as a one-digit Processing Code in the 24-digit IMTM tray barcode. The 24-digit IMTM tray barcode contains additional

elements that enable the processing status of trays, sacks, and flat tubs to be monitored throughout the Postal Service. These additional barcode elements include the Mailer ID and the Serial Number.

Only the first eight digits of the total 10 digits in the 10 digit Postal Routing Barcode are retained in the 24-digit IM™ tray barcode. The remaining barcode elements/digits do not necessarily match up to the elements/digits in the corresponding positions.

Table XIII displays the encoded 24-digit barcode elements for the IM™ tray label mailer formats - Label Type 1, the 6-digit Mailer ID and Label Type 8, the 9-digit Mailer ID. The numerals in the square brackets represent the number of digits contained in each field.

Table XIII- Comparison of Encoded Barcode Elements

Element	24-Digit Barcode
All Barcode Elements are Numeric	Destination ZIP Code [5]
	CIN [3]
	Processing Code [1]
	6-digit Mailer ID [6] (Label Type 1) OR 9-digit Mailer ID [9] (Label Type 8)
	Serial Number [8] (Label Type 1) OR Serial Number [5] (Label Type 8)
	IM Label Type [1] (Label Type 1 or Label Type 8)

3.8 Unique Barcode Requirements

3.8.1 Timeframe – The 24-digit IM™ tray barcode creates a unique ID for each tray and sack. To maintain uniqueness of the barcode the Postal Service requires that for both Label Type 1, 6-digit Mailer ID, and Label Type 8, 9-digit Mailer ID, the period of uniqueness shall be between 30 to 45 days, as determined by the specific Postal Service program office.

3.8.2 Label Serialization – Implementation of the IM™ tray label impacts the existing labeling systems in that they now need to provide and ensure a unique ID in the barcode for a specified timeframe. Furthermore, the definition of specific barcode elements to ensure uniqueness, lays the foundation for the exchange of information as

the tray or sack is processed through the postal network. The serialization strategy defines how each of the label types imparts uniqueness, in addition to how the uniqueness is maintained for the life of the tray or sack. For each flow, uniqueness is defined in terms of constant, key, and variable fields in the barcode. Constant fields are those that always stay the same due to the origin of the mail and/or the source of the tray or sack label. The key elements are elements that vary, but not at the control of the originator. Variable fields are fields where the originator may vary control and are the most effective means to guarantee uniqueness. At present, the Serial Number is the only variable field that the originator fully controls. Once uniqueness is defined, maintaining uniqueness of the tray or sack ID for its entire “life” is the goal of serialization management.

Table XIV shows all the constant and key barcode data elements for Label Type 1, 6-digit Mailer ID and Label Type 8, 9-digit Mailer IM™ tray label barcode formats.

Table XIV – Constant, Key and Variable Barcode Data Elements

Customer-to-Processing Plant	Key	Key	Constant ¹	Constant	Variable	Constant ²
Barcode Data Element – Label Type 1	ZIP (5-digits)	CIN (3-digits)	Processing Code (1-digit)	Mailer ID (6-digits)	Serial Number (8-digits)	Label Type (1-digit)
Barcode Data Element – Label Type 8	ZIP (5-digits)	CIN (3-digits)	Processing Code (1-digit)	Mailer ID (9-digits)	Serial Number (5-digits)	Label Type (1-digit)

¹Most printing systems provide a single Processing Code and as such, this field may be a constant. Some printing systems (including select mailer systems) are provided a contingency Processing Code. Depending upon the nature of the use of these contingency codes (whether a given printing system has control over when the contingency code is used); this field could either be a key or a variable field.

²Mailer systems shall produce Type 1 or Type 8 labels depending on whether a 6-digit or 9-digit Mailer ID is used; hence, this field is considered to be a constant.

4 QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection – The label printing entity is responsible for the inspection and testing of all IM™ tray labels prior to submission to the United States Postal Service. The label printing entity is also responsible for maintaining the overall

quality of the labels they produce. It is highly recommended that inspection and testing of IM™ tray labels be periodically undertaken.

At least 70 percent of the barcodes in each mailing shall have an overall symbol grade of “B” or better when measured with measured with a 10 mil aperture (0.250 mm) in the red spectral range between 630 nanometers (nm) and 675 nm. The remainder can measure no less than a Symbol Grade of “C”. Specified symbol grades are based upon the ISO/IEC 15416 Barcode Print Quality Guideline (formerly INCITS 182) which recommends a method of measuring the quality parameters of printed bar code symbols.

The different symbol grades indicate print quality. Only the use of the appropriate aperture for the X-dimension of the barcode symbol under consideration, will guarantee that the grade obtained from measurement of this symbol, is the correct grade according to the ISO/IEC 15416 specified methodology.

5 PREPARATION FOR DELIVERY

This section is not applicable to this specification.

6 NOTES

6.1 Intended Use – This document shall be used by the Postal Service and approved vendors for manufacturing systems that will produce, read, decode, and/or transmit IM™ tray label information for automated processing.

6.2 Additional Information – Any questions or concerns may be addressed to:

IM TRAY LABEL PROGRAM MANAGER
INTELLIGENT MAIL PLANNING AND STANDARDS
INTELLIGENT MAIL AND ADDRESS QUALITY
ENGINEERING
8403 LEE HIGHWAY
MERRIFIELD, VA 22082-8101
Tel.: (703) 280-7293

APPENDIX A

LABEL STOCK SPECIFICATIONS
LABEL, TRAY (GENERATED BY OTHERS)

10 SCOPE

10.1 Scope – This specification covers the functional performance requirements for printed tray label generated by others, specifically, mailers, and not the Postal Service.

20 APPLICABLE DOCUMENTS

20.1 Government Documents – The following documents of the issue in effect on the date of solicitation for bid or request for proposal, form a part of this specification to the extent specified herein.

STANDARDSFederal

FED-STD-595 Colors Used in Government Procurement

(Copies of Federal Standards may be obtained from the General Services Administration, Federal Supply Service, FSS Acquisition Management Center, Environmental Programs and Engineering Policy Division (FCOE), Washington, DC 20406, or by visiting their web site at <http://www.fss.gsa.gov/pub/fed-specs.cfm>.)

SPECIFICATIONSMANUALSUnited States Postal Service

Domestic Mail Manual (DMM)

Handbook PO-502 Container Methods

(Copies of United States Postal Service standards may be obtained from the Contracting Officer (CO) or the Reproduction Section, Office of Program Services, Engineering, 8403 Lee Highway, Merrifield, VA 22082-8101.)

OTHER PUBLICATIONSFederalCode of Federal Regulations (CFR)

21 CFR 175.105 Indirect Food Additives: Adhesives and
Components of Coatings - Adhesives

21 CFR 175.125	Indirect Food Additives: Adhesives and Components of Coatings – Pressure-Sensitive Adhesives
21 CFR 176.170	Indirect Food Additives: Paper and Paperboard Components - Components of Paper and Paperboard in Contact with Aqueous and Fatty Foods
21 CFR 176.180	Indirect Food Additives: Paper and Paperboard Components - Components of Paper and Paperboard in Contact with Dry Foods
16 CFR 1500.3	Hazardous Substances and Articles: Administration and Enforcement Regulations - Definitions
40 CFR 247.10	Protection of Environment: Comprehensive Procurement Guideline for Products Containing Recovered Materials.

(The Code of Federal Regulations (CFR) and Federal Register (FR) may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7594 or by visiting <http://www.access.gpo.gov/nara/cfr/cfr-retrieve.html>).

20.2 Non-Government Documents – The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on the date of the solicitation for bids or request for proposal shall apply. Refer also to Label Test Procedures.

Technical Association of the Pulp and Paper Industry (TAPPI)

T402	Standard Conditioning and Testing Atmospheres for Paper, Board, Pulp Handsheets and Related Products
T410	Grammage of Paper and Paperboard (Weight per Unit Area)
T411	Thickness (Caliper) of Paper, Paperboard, and Combined Board
T414	Internal Tearing Resistance of Paper (Elmendorf-Type Method)
T425	Opacity of Paper (15/d Geometry, Illuminant A/2 Degrees, 89% Reflectance Backing and Paper Backing)
T437	Dirt in Paper and Paperboard

T452	Brightness of Pulp, Paper, and Paperboard
T479	Smoothness of Paper (Bekk Method)
T489	Bending Resistance (Stiffness) of Paper and Paperboard (Taber-Type Tester in Basic Configuration)

(Copies of TAPPI Standards may be obtained from the Technical Association of the Pulp and Paper Industry, PO Box 105113, Atlanta, GA 30348-5113 or by visiting their website at <http://www.tappi.org>).

Automatic Identification Manufacturers

ANSI/AIM BC4	International Symbology Specification- Code 128
ANSI/AIM BC2	Uniform Symbology Specification Interleaved 2 of 5

(Copies of AIM documents may be obtained from the Automatic Identification Manufacturers, Inc; 634 Alpha Drive; Pittsburgh, PA 15238, or by visiting their web site at <http://www.aimi.org>)

American Society for Testing and Materials (ASTM)

ASTM D 1729	Standard Practice for Visual Appraisal of Color Differences of Diffusely Illuminated Opaque Materials
ASTM F 1405	Standard Test Method for Determining the Dynamic Thermal Response of Direct Thermal Imaging Products – Atlantek Method

(Copies of ASTM documents may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or by visiting their website at <http://www.astm.org>).

American National Standards Institute (ANSI)

INCITS 182	Information Systems - Barcode Print Quality – Guideline
ISO/IEC 15416	Information Technology – Automatic Identification and Data Capture Techniques – Barcode Print Quality Test Specification – Linear Symbols (formerly INCITS 182)

(Copies of ANSI documents may be obtained by writing to Global Engineering Documents, Attn: Customer Service Department, 15 Inverness Way East, Englewood, CO 80112, or by visiting their web site at <http://global.ihs.com>; requests for permission

to reproduce ISO documentation should be addressed to ISO at the following address or to ISO's member body in the country of the requestor: Copyright Manager, ISO Central Secretariat, 1 rue de Varembé, Case postale 56, CH-1211 Geneva 20, Switzerland, or by visiting their web site at http://www.iso.org/iso/publications_and_e-products.htm for more information).

20.3 Order of Precedence – In the event of conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

30 LABEL REQUIREMENTS

30.1 General – This specification covers the functional performance requirements of flats and letter tub tray labels. Labels are to be applied to tubs as part of the United States Postal Service Mail Sorting program. Label requirements are addressed in this specification in detail in terms of the labels' ability to meet the stated requirements and the process used to verify that labels meet those requirements. Certain design requirements, such as dimensions and opacity, are specified since it is already known that such design criteria must be met in order for the labels to function within the Postal Service.

30.2 Description – The labels shall be as specified herein.

30.3 Materials – All components of the label (face stock) shall be such that the label will meet the requirements of this specification. Requirements for the label components shall be as specified in 30.3.1 through 30.4 and as shown in Table I.

30.3.1 Recycled and Recyclable Materials – In accordance with Federal procurement policy, the Postal Service encourages the use of the highest percentage of recovered and recyclable materials practicable in the manufacture and delivery of the finished material specified herein, as long as all specification requirements are fulfilled. 40 CFR 247.10 defines recovered material.

30.3.2 Label Components

30.3.2.1 Face Stock – The paper used for face stock shall allow the label to function properly during all Postal Service operations. The properties of the face stock are summarized in Table I.

30.3.2.2 Label Paper (Face Stock) Opacity – The opacity of the face stock shall be as specified in 60.2.1.a.

30.3.2.3 Color – The color of the label shall be evaluated using the procedure called out in 60.2.1.b.

30.3.2.4 Toxicity – No materials that are toxic or potentially harmful shall be used in construction of the label. See Federal documents 16 CFR 1500.3, 21 CFR 176.170, 21 CFR 176.180, 21 CFR 175.105, and 21 CFR 175.125.

30.3.2.5 Barcode Readability – The labels shall permit barcode printing with no defects that might interfere with barcode reader performance. Failure to produce readable barcodes (as referred to within the body of this document) shall constitute failure when tested in accordance with 60.3.

30.3.2.6 Resistance to Water – The label materials resistance to water shall be tested in accordance with 60.2.2 and Table I.

30.3.2.7 Curling – The label materials performance against curl shall be tested in accordance with 60.2.3 and Table I.

30.3.2.8 Resistance to Sunlight. – The label materials resistance to sunlight shall be tested in accordance with 60.2.4 and Table I.

30.3.2.9 Print Quality – Print quality shall be tested in accordance with 60.3.3.4.

30.3.2.10 Stock Storage Life - Stock storage life in ambient conditions, i.e., $50 \pm 2\%$ relative humidity at $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($73.4^{\circ}\text{F} \pm 1.8^{\circ}\text{F}$), shall be as follows

- a. After 3 months = 5% change in color and physical properties
- b. After 6 months = 10% change in color and physical properties

To detect noticeable and appreciable changes see 60.3.1 accelerated aging test.

30.3.3 Physical Attributes

30.3.3.1 Dimensions – The label construction shall have dimensions as specified in accordance with label paper stock requirements, see 3.1.

30.4 Workmanship – The paper of the labels shall be clean, free of dirt spots, slivers, and foreign matter, and shall be uniform in color. The paper shall be free of holes, tears, cuts, folds, scuff marks, wrinkles, and any other defects or irregularities which affect its appearance and serviceability. Evidence of any of these defects shall constitute failure to meet the workmanship requirements.

40 VERIFICATION PROCEDURES

40.1 Verification of the labels shall include an examination of physical attributes per section 50 and tests of the labels' material and performance characteristics per section 60.

40.2 It should be noted that the examination for performance will always begin with the evaluation under standard conditions, as described in 60.3.2. Failure of the labels to perform properly under standard conditions will be reason for terminating further testing.

40.3 If the labels pass the performance evaluations under standard conditions, their performance will then be evaluated as specified in 60.3.1 under different environmental conditions.

40.4 Failure to meet requirements when inspected in accordance with section 50 or tested in accordance with the procedures specified in section 60 shall constitute failure of the particular test.

50 EXAMINATION

50.1 Unless otherwise noted, section or paragraph numbers in parenthesis identify the location of the requirement in the label specification. Labels shall be examined for the following defects

50.2 Label Defects

101. Label dimensions and configuration not as specified (30.3.3.1)

102. Label material not clean (30.4)

103. Label material shows dirt spots, slivers, or foreign matter (30.4)

103. Label material not uniform in color (30.4)

104. Label material contains defects such as holes, tears, cuts, folds, scuff marks, or wrinkles (30.4)

60 MATERIAL AND PERFORMANCE TESTS

60.1 General – The following paragraphs specify the test procedures for the material and performance testing of label stock or labels. The individual responsible for the evaluations on data sheets that reflect the required testing shall record all verifications and test results. Unless otherwise noted, numbers in parentheses identify the location of the requirement in the label specification.

60.2 Material Tests

60.2.1. The following tests shall be used to verify the label paper's conformance to color and opacity requirements:

- a. Opacity – The opacity of the face stock shall not be less than 88 percent when measured in accordance with TAPPI T425.
- b. Color – The label shall be white, and compare visually to Chip No. 27875 of FED-STD-595, when measured in accordance with ASTM D 1729.
- c. The facestock shall contain no brighteners that would interfere with processing on Postal Service automation equipment. The Postal Service encourages conformance to 30.3.2.1 in the choice of materials.

60.2.2 Resistance to Water - A 16 hour water soak test shall be performed to determine thermal paper's resistance to water. Generate ten samples of imaged label stock using an Atlantek dynamic response tester. The settings to be used are medium energy, step 10, pattern 5. These samples shall be immersed in 22°C distilled water for 16 hours. Upon removal from the water, optical density is measured on the air-dried

sample and compared to the initial value. The difference between the initial optical density and the optical density of the water exposed sample shall not exceed more than 15 percent. The supplier shall submit the tested samples with the test results.

60.2.3 Curling - The curling test is performed at 20 percent relative humidity and 75 percent relative humidity. In each case the temperature is maintained at $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($73.4^{\circ}\text{F} \pm 1.8^{\circ}\text{F}$). A number of single 8.00 x 10.00 sheets of the paper stock, which have been conditioned for 24 hours at the temperature and humidity specified in 3.3, are laid on a smooth, horizontal surface. After 24 hours, the sheets are examined and, if necessary, turned over so that the convex side is up. The amount of curl is then measured from the flat surface to the highest point of the sheet. The test shall be performed at 20 percent relative humidity first and then the same sheets shall be exposed to the 75 percent relative humidity for the 24-hour period.

60.2.4 Resistance to Sunlight - The image stability determination shall be made by exposing the thermal paper to 7000 lucas of fluorescent light for 14 days (336 hours). The difference in optical density when measured with a Macbeth Optical Densitometer or equivalent shall not exceed more than 10 percent between initial sample and the light exposed sample. The supplier shall conduct the test on an instrument of their choice; however, the supplier shall submit the tested samples with the test results.

60.3 Performance Tests – These tests verify the property of the label by exposing samples to high and low temperatures and high humidity.

60.3.1 Evaluation Under Different Environmental Conditions (Accelerated Aging) – This test verifies the stability and establishes the potential shelf life of the label by exposing labels to high and low temperatures and high humidity.

60.3.1.1 Equipment

- a. Laboratory chamber or oven with air circulation capability at $55^{\circ} \pm 1^{\circ}\text{C}$ ($131^{\circ} \pm 2^{\circ}\text{F}$).
- b. Laboratory chamber or refrigerator with air circulation capability at $-40^{\circ} \pm 1^{\circ}\text{C}$ ($-40^{\circ} \pm 1^{\circ}\text{F}$).
- c. Laboratory chamber with air circulation capability at $38^{\circ} \pm 1^{\circ}\text{C}$ ($100^{\circ} \pm 2^{\circ}\text{F}$) and 90% relative humidity.

60.3.1.2 Procedure

- a. Expose 100 labels (each) to the conditions listed in 60.32.1.1. The labels shall be fully exposed, without any packaging or packing materials used in shipping.
- b. Condition the labels from (a) in the chambers for a duration of seven days.

- c. Remove the labels and allow equilibrating at standard conditions ($23^{\circ} \pm 1^{\circ}\text{C}$ and 50% relative humidity) for 24 hours.
- d. Inspect the labels for any visible deterioration. Optical and physical properties shall not change by more than 10%. Labels shall still function properly and printing on these labels shall still meet all requirements of this specification.

60.3.2 Evaluation Under Different Environmental Conditions (Printed Labels) – This test verifies the stability of printing under environmental conditions encountered in service.

60.3.2.1 Equipment

- a. Laboratory chamber or oven with air circulation capability at $55^{\circ} \pm 1^{\circ}\text{C}$ ($131^{\circ} \pm 2^{\circ}\text{F}$).
- b. Laboratory chamber or refrigerator with air circulation capability at $-40^{\circ} \pm 1^{\circ}\text{C}$ ($-40^{\circ} \pm 1^{\circ}\text{F}$).
- c. Laboratory chamber with air circulation capability at $38^{\circ} \pm 1^{\circ}\text{C}$ ($100^{\circ} \pm 2^{\circ}\text{F}$) and 90% relative humidity.

60.3.2.2 Procedure

- a. Generate 30 printed labels containing both bar codes and human-readable text.
- b. Measure the print quality of the bar codes using the procedure in 60.4 and record.
- c. Divide the labels into 3 sets of ten labels. Each set will be exposed to one of the conditions listed in 60.3.2.1.
- d. After conditioning the label sets as described in step (c), remove the labels from the chambers and allow to equilibrate at standard conditions ($23^{\circ} \pm 1^{\circ}\text{C}$ and 50% relative humidity) for 24 hours.
- e. Measure the bar code print quality and compare the results to those achieved in step (b). All labels shall meet an ANSI grade of 'C' or better.

60.3.3 Operational Testing (Machine) – Two hundred labels shall be submitted and used to print test labels for flats and letter tubs in order to verify operational performance of labels. Failure to meet the requirements of all the tests shall constitute failure of the specific tests. Prior to testing, labels shall be examined in accordance with tests listed in section 50.

60.3.3.1 Required Test Equipment – The following equipment and material is required to perform the test procedures specified herein:

- a. At least one P&DC site equipped with an operating Tray Management System (TMS) or Low Cost Tray Sorter (LCTS) that meets all Postal Service requirements.
- b. A TMS or LCTS system operating in accordance with Postal Service mail processing requirements.
- c. A sample test set consisting of 100 flats tubs and 100 letter trays.
- d. The Postal Service visual inspection gauges for the labels.
- e. Vendor supplied labels.
- f. A photocopy machine capable of reduction copying at 75 percent of full size. The paper to be used for photocopying shall be 75 g/m² basis weight, white, photocopy paper.

60.3.3.2 Labeling – The test deck shall have printed labels applied to Postal Service flats and letter trays for further evaluation.

60.3.3.3 Decodeability – Transfer the labeled test deck from 60.3.3.2 to a tray label barcode reader, such as, TMS or Low Cost Tray Sorter, and process it with this system.

60.3.3.3.1 Collect any pieces rejected as unreadable and rerun them a second time. If any of these pieces are rejected as unreadable in the second pass, record the total and set them aside for additional evaluation.

60.3.3.4 Print Quality – Labels shall not smear in mail processing operation. Printed information shall be legible as printed and after reproducing in reducing mode.

60.3.3.4.1 Remove every other piece (50 total) and inspect the text for print quality. Printing on labels shall be of sufficient quality that it can be easily read and there is no ambiguity between similarly shaped characters (e.g., the "5", "S", and "6" and the alpha "O", "Q", and numeric "0"). Inspect the bar codes for print quality according to the procedure in section 60.4. All bar codes shall have an ANSI grade of "C" or better.

60.3.3.4.2 Remove the labels from these pieces and affix them to sheets of white copy paper. Photocopy these sheets onto 75 g/m² white photocopy paper at 75 percent of full size. Examine the copies for legibility.

60.3.3.4.3 Examine these labels (from 60.3.3.4.2) as well as any of the labels failing a second sortation in 60.3.3.3.1 for evidence of print smearing.

60.4 Barcode Verification – Use this procedure for evaluating barcode print quality for all barcodes generated with the label stock tested under this specification.

60.4.1 Equipment – A barcode verifier that conforms to the guidelines of ISO/IEC 15416 specified methodology

60.4.2 Procedure – The barcode verifier shall have the following settings:

- j. a. Wavelength = 660nm (red)
- b. Aperture = 0.010 in.

A red spectral range measuring between 630 nanometers (nm) and 675 nm range is also allowed when measuring with a 10 mil aperture (0.250 mm). Each barcode evaluated shall be scanned a minimum of three times, with the results averaged. Bar codes shall be graded based on the criteria of the ANSI/AIM BC2 and ANSI/AIM BC4 as appropriate for the respective barcodes. The overall symbol grade generated for each label shall be used for comparison to the requirements of this specification.

Table I – Face Stock Requirements for Label

Property	Unit	Requirement	Method
Opacity	%	≥ 88%	TAPPI T425
Color	(none)	Visual	ASTM D 1729
Basis Weight	Lb SHEET # Size	95 minimum (500 – 24" X 36")	TAPPI T410
Caliper	Inch	.007±5%	TAPPI T411
Brightness	%	≥ 76	TAPPI T452
Stiffness MD CD	g-cm	7 - 18 7 – 12	TAPPI T489
Tear CD	G	≥ 85	TAPPI T414
Smoothness	Sec	≥ 600	TAPPI T479
Image Density	OD	1.30±0.10	Section 60.2.2
Curl	Mm	≤10	Section 30.3.2.7
Water Resistance	% Density Loss	≤25	Section 30.3.2.6
Sunlight	% Density Loss	≤10	Section 30.3.2.8

MD = Machine Direction, CD = Cross direction.

APPENDIX B

LABEL EXAMPLES

10 SCOPE

10.1 Intended Use – This appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

20 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

30 REQUIREMENTS

30.1 24-digit IM™ Tray Label – The 24-digit IM™ tray label uses the 24-digit ISS Code symbology for encrypting the data. While the label format remains constant, the human readable elements on the label may vary as the tray undergoes the various stages of mail preparation. Figures 1 and 2 depict two examples of Mailer Labels. Figure 1 depicts the 24-digit IM™ tray label representation of a Mailer to Postal Service Plant label for a mailer with a nine-digit Mailer ID (MID). Figure 2 depicts the 24-digit IM™ tray label representation of a Mailer to Carrier Route label for a mailer with a six-digit MID; mailers use this label to indicate trays containing mail that has been sorted by a five-digit ZIP Code down to the carrier route level. A subtle difference to note in the label representations for 6- and 9-digit MIDs is the very last digit (the 24th position) in the human readable representation of the barcoded elements. For Label Type 1 – 6-digit MID, this digit shall always be “1”; for Label Type 8 – 9-digit MID, this digit shall always be “8”.

NOTE: Only the first eight digits of the total 10-digits contained in the legacy 10-digit Postal Routing barcode are identical to the first eight digits of the 24 digits in the 24-digit IM™ Tray barcode for the corresponding barcode data.

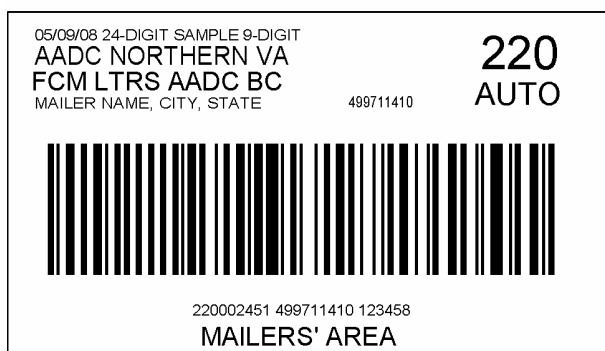


Figure 1: 24-Digit Mailer-to-Postal Label Example - 9 Digit Mailer ID

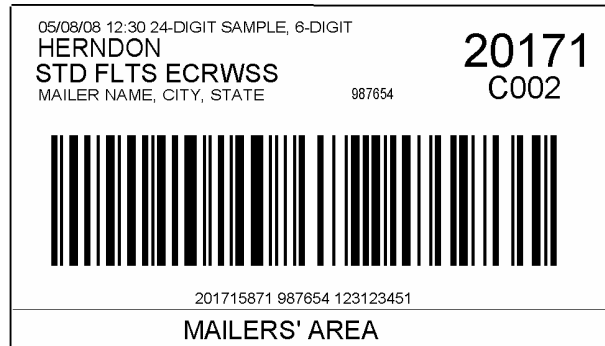


Figure 2: 24-Digit Mailer-to-Carrier Route Label Example - 6 Digit Mailer ID

APPENDIX C

24-DIGIT BARCODE DATA VALUES

10 SCOPE

10.1 Intended Use – This appendix is a mandatory part of the specification. The information contained herein is intended for compliance.

20 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

30 REQUIREMENTS

30.1 24-Digit Barcode Data Values – Two IM™ tray label types have been developed in support of Format 1, the Mailer Flow. One that allows for Customers that use a 6-digit Mailer ID, and a second one that allows for the use of a 9-digit Mailer ID.

These types have been defined as:

- Type 1 – 6-digit Mailer ID Customer-to-Postal Service
- Type 8 – 9-digit Mailer ID Customer-to-Postal Service

The Mailer IDs for Customers will be managed and coordinated by the PostalOne! Program Management Office.

30.1.1 6-digit Mailer ID 24-digit IM™ Tray Barcode Data Values – Table I depicts the required barcode layout and Table II provides the definition of the encoded data elements of the 24-digit IM™ tray barcode for Label Type 1, 6-digit Mailer ID to Postal Service.

Table I – 24-digit IM™ Tray Barcode Data Elements, Label Type 1: 6-digit Mailer ID-to-Postal Service

Process Flow	24-Digit Barcode Data Elements (Label Type 1)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Customer-to-Processing Plant (Mailer)	ZIP Code 3- or 5-digit					CIN			Processing Code	6-digit Mailer ID						8-digit Serial Number								Label Type 1

Table II – 24-Digit Encoded Data Definitions Label Type 1: 6-digit Mailer ID-to-Postal Service

Barcode Element	Digits	Definition
ZIP Code	1–5	The ZIP Code identifies the tray or sack's destination or the ZIP Code of the mail within the container. For trays prepared as five-digit trays in accordance with the DMM, the destination ZIP Code shall be the five-digit ZIP Code without modification. For trays prepared as three-digit trays in accordance with the DMM, the destination ZIP Code shall be the three-digit ZIP Code followed by two zeros.
CIN	6–8	The applicable 3-Digit CIN that correctly describes the contents of the tray or sack based on the Mailer CIN List in the DMM. If no listing for the tray contents is found, three zeros must be used.
Processing Code	9	The Processing Code identifies the system or facility that generated the label. Processing Code Value(s) Primary Value Mailer Automated, Barcoded, Machinable 1 Mailer Mixed, Unknown, Non-barcoded 7
Mailer ID	10–15	The Mailer ID field is a unique six-digit U. S. Postal Service assigned number used to identify each mailer, i.e., the business or organization that prepared the tray or sack.
Serial Number	16–23	The Serial Number is a unique eight-digit serial number for each tray or sack.
Label Type 1	24	The Label Type is used as a qualifier for systems to recognize and parse the data within this barcode. For Label Type 1, 6-digit Mailer ID-to-Postal Service, the value is 1.

30.1.2 9-digit Mailer ID 24-digit IM™ Tray Barcode Data Values – Table III depicts the required barcode layout and Table IV provides the definition of the encoded data elements of the 24-digit IM™ tray barcode for Label Type 8, 9-digit Mailer ID to Postal Service.

Barcode Element	Digits	Definition
Number		each tray or sack.
Label Type 8	24	The Label Type is used as a qualifier for systems to recognize and parse the data within this barcode. For Label Type 8, 9-digit Mailer ID-to-Postal Service, the value is 8.

APPENDIX D

ACRONYMS AND ABBREVIATIONS

AIM	Automatic Identification Manufacturers
ANSI	American National Standards Institute
CIN	content identifier number
DMM	Domestic Mail Manual
DOD	day of delivery
INTERLEAVED (I) 2 OF 5	Interleaved 2 of 5 (AIM Uniform Symbology Specification)
ID	identification
ISS	International Symbology Specification
IMD	intelligent Mail Device
LPC	Label Printing Center
MPE	mail processing equipment
P&DC	processing and distribution center
Rb	bar reflectance
Rs	white bar (space) reflectance
SN	serial number
USPS	United States Postal Service
USS	Uniform Symbology Specification