

M000 General Preparation Standards

M040 Pallets

M041 General Standards

Summary M041 describes the physical characteristics for pallets, pallet top caps, and pallet boxes. The section also covers the standards for stacking pallets and preparing pallets. It also covers preparation of palletized mailings, including combined, copalletized, and mixed rate level mailings.

1.0 PHYSICAL CHARACTERISTICS

Standards All pallets presented to the USPS, whether USPS-provided or mailer-provided, must meet the standards in 1.2 through 1.4. Mail on such pallets must meet the standards for the class and rate claimed.

1.1

Construction Pallets must be made of high-quality material that can hold loads equal to a gross weight of 2,200 pounds. Pallets must measure 48 by 40 inches and must allow four-way entry by forklift trucks and two-way entry by pallet jacks.

1.2

Securing Pallets [5-30-03] Except for stacked pallets under 3.1 and pallet boxes under 4.3, each loaded pallet of mail must be prepared to maintain the integrity of the mail and the entire pallet load during transport and handling using one of the following methods:

1.3

- a. Securing with at least two straps or bands of appropriate material. Wire or metal bands, straps, buckles, seals, and similar metal fastening devices cannot be used.
- b. Wrapping with stretchable or shrinkable plastic.
- c. Securing with at least two straps or bands of appropriate material and wrapping with stretchable or shrinkable plastic. Wire and metal bands and straps, metal buckles, metal seals, and similar metal fastening devices cannot be used.

Nonconforming Mailer The USPS informs any mailer or mailer's agent who presents palletized mailings, including plant-verified drop shipment (PVDS), when the mailer's pallets fail to meet basic pallet integrity and safety standards. After a mailer is notified and allowed to make changes to improve load integrity, if the mailer's methods, or those of the mailer's agent, do not work, the mailer is considered nonconforming. A nonconforming mailer must meet the specifications for nonconforming mailers for top-cap use, stacking of pallets, pallet box construction, and maximum height/tiers of trays in 2.0 through 5.0, respectively. A mailer is suspended from the pallet program if the mailer's pallets continue to fail to meet the minimum load integrity levels after being notified and allowed to make changes.

1.4

2.0 TOP CAPS

Use Top caps are used as follows:

2.1

- a. Except under 2.1b and 2.1c, all pallets of sacks, trays, parcels, packages of mail, or pallet boxes must be top-capped if the pallets are stacked two, three, or four tiers high when presented to the USPS for acceptance.
- b. The top pallet need not be top-capped if the strapping or banding securing the stacked pallets together neither damages the mail on the top pallet nor allows the stack to shift.

- c. Lower pallet(s) containing either parcels or packages of mail need not be top-capped if the top surface of each pallet load provides a sturdy, flat surface, parallel to the pallet base, that allows safe and efficient stacking of pallets placed on top and prevents sliding of the top pallet(s), damage to the loaded mail, or crushing of the load.

Construction
2.2 Any material may be used as a top cap if it provides a flat, level surface horizontal to the base pallet, protects the integrity of the mail below it while supporting a loaded pallet above, and allows easy entry of a forklift to remove the upper pallet(s). Flimsy paper or fiberboard (e.g., the ends of paper rolls) or similar material is inadequate and may not be used as a top cap.

Securing
2.3 A top cap must be secured to the pallet horizontal to the plane of the base pallet, with either stretchwrap or at least two crossed straps or bands, so that the cap stays in place to protect the mail and maintain the integrity of the pallet load.

Nonconforming
2.4 A nonconforming mailer (see 1.4) must use top caps on all pallets of sacks, letter mail trays, parcels, or packages of mail, regardless of weight, or on pallets containing pallet boxes no more than 60 inches high. Top caps must be approximately 48 by 40 inches and meet one of these construction standards:

- a. Five-wood boards, with uniform edges and nine-leg pallet contact for stacking.
- b. Fiberboard box-end style, with a minimum 3-inch side and wall material of at least double-wall corrugated fiberboard C-flute and/or B-flute.
- c. Fiberboard honeycomb covered on both sides, with heavy linerboard at least 1/2 inch thick.
- d. Corrugated fiberboard C-flute sheet covering the entire top of the load, with standard pallet solid fiberboard corner edge protectors.

3.0 STACKING PALLETS

Physical Characteristics
3.1

- Pallets may be stacked two, three, or four tiers high if:
- a. The combined gross weight of the stacked pallets (pallets, top caps, and mail) does not exceed 2,200 pounds.
 - b. The heaviest pallet is on the bottom and the lightest is on the top.
 - c. Individual pallets are secured with straps or stretchable or shrinkable plastic as specified in 1.3.
 - d. [5-30-03] The stack of pallets is secured with at least two straps or bands of appropriate material to maintain the integrity of the stacked pallets during transport and handling. Wire or metal bands, straps, buckles, seals, and similar metal fastening devices cannot be used. The stack of pallets cannot be secured together with stretchable or shrinkable plastic.
 - e. Each pallet is top-capped as specified in 2.0.
 - f. The combined height of the stacked pallets and their loads does not exceed 84 inches. *Exception:* Pallets prepared for entry at Anchorage or Fairbanks, Alaska, cannot exceed 72 inches (pallets, top caps, and mail).

Nonconforming
3.2 A nonconforming mailer (see 1.4) who stacks pallets is subject to the requirements of 3.1 with the additional restrictions that the combined height of any stacked pallets may not exceed 77 inches and that stacking pallets four tiers high is permitted only for pallets of parcels.

4.0 PALLET BOXES

Use
4.1 A mailer may use pallet boxes constructed of single-, double-, or triple-wall corrugated fiberboard placed on pallets to hold sacks or parcels prepared under [M045](#). Pallet boxes must protect the mail and maintain the integrity of the pallet loads throughout transportation, handling, and processing. Single-wall corrugated fiberboard may be used only for light loads (such as lightweight parcels) that do not require transportation by the USPS beyond the entry office, or for Parcel Post DSCF rate mail. Mailers must supply their own pallet boxes. The base of the boxes must measure approximately 40 by 48 inches. [M045](#) requires the use of pallet boxes meeting the size requirements in [4.2](#) for machinable Parcel Post claiming OBMC Presort and BMC Presort discounts. [M045](#) prohibits use of pallet boxes for nonmachinable Parcel Post claiming OBMC Presort and BMC Presort discounts. Pallet boxes meeting the size dimensions in [4.2](#) also may be used at the mailer's option for Parcel Post DSCF and Parcel Post DDU rate mail.

Height
4.2 The combined height of a single pallet, pallet box, and mail may not exceed 77 inches. The contents of the box may not extend above the top rim of the box. For all Package Services mailings entered at a DSCF or DDU, the height of the pallet box may not exceed 60 inches (excluding the pallet). For Parcel Post OBMC Presort and BMC Presort rate mailings of machinable pieces, the height of the pallet box must not exceed 69 inches (excluding the pallet).

Securing
4.3 [\[5-30-03\]](#) Pallet boxes must be secured to the pallet with strapping, banding, stretchable plastic, shrinkwrap, or other material (wire or metal bands, straps, buckles, seals, and similar metal fastening devices cannot be used) that ensures that the pallet can be safely unloaded from vehicles, transported, and processed as a single unit to the point where the contents are distributed with the load intact if:

- a. The pallet and its contents are transported by the USPS from the office where the mail is accepted to another postal facility where the contents are distributed; and
- b. The weight of the mail in the box is not sufficient to hold the box in place on the pallet during transportation and processing.

Nonconforming
4.4 Except when mailing Parcel Post claiming a DSCF or DDU rate, a nonconforming mailer (see [1.4](#)) may use pallet boxes only if the boxes are constructed of triple-wall corrugated fiberboard (C-flute and/or B-flute material) with a maximum height (pallet and box) of 77 inches.

5.0 PREPARATION

Presort
5.1 Pallet preparation and pallet sortation are subject to the specific standards in [M045](#), [M920](#), [M930](#), and [M940](#). Pallet sortation is generally intended to presort the palletized portion of a mailing to at least the finest extent required for the corresponding class of mail and method of preparation. Pallet sortation is sequential from the lowest (finest) level to the highest and must be completed at each required level before the next optional or required level is prepared. Standard preparation terms for pallets are defined in [M011](#), standard presort levels are defined in [M045](#), and advanced presort levels are defined in [M920](#), [M930](#), and [M940](#). For sacks, trays, or machinable parcels on pallets, the mailer must prepare all required pallet levels before any mixed ADC or mixed BMC pallets are prepared for a mailing or job. Packages prepared under [M045](#) or [M920](#), [M930](#), or [M940](#) must not be placed on mixed ADC or mixed BMC pallets. Packages that cannot be placed on pallets must be prepared in sacks under the standards for the rate



claimed. The standards for package reallocation to protect the SCF or BMC pallet (M045.4.0 and 5.0) are optional methods of pallet preparation designed to retain as much mail as possible at the SCF or BMC level. These standards may result in some packages of Periodicals flats and irregular parcels and Standard Mail flats that are part of a mailing job prepared in part as palletized flats at automation rates not being placed on the finest level of pallet possible. Mailers must use PAVE-certified presort software to prepare mailings using package reallocation (package reallocation is optional, but if performed, it must be done for the complete mailing job).

Required Preparation

5.2

These standards apply to:

- a. Periodicals, Standard Mail, and Package Services (except for Parcel Post mailed at BMC Presort, OBMC Presort, DSCF, and DDU rates). A pallet must be prepared to a required sortation level when there are 500 pounds of packages, sacks, or parcels or 72 linear feet or six layers of letter trays. For packages of Periodicals flats and irregular parcels and packages of Standard Mail flats on pallets that are prepared under the standards for package reallocation to protect the SCF pallet (M045.4.0), not all mail for a 5-digit scheme carrier routes, 5-digit scheme, 5-digit carrier routes, or 5-digit pallet or for a merged 5-digit scheme, merged 5-digit, or 3-digit pallet is required to be on that corresponding pallet level. For packages of Standard Mail flats on pallets prepared under the standards for package reallocation to protect the BMC pallet (M045.5.0), not all mail for a required ASF pallet must be on an ASF pallet. Mixed ADC or mixed BMC pallets of sacks, trays, or machinable parcels, as appropriate, must be labeled to the BMC or ADC (as appropriate) serving the post office where mailings are entered into the mailstream. The processing and distribution manager of that facility may issue a written authorization to the mailer to label mixed BMC or mixed ADC pallets to the post office or processing and distribution center serving the post office where mailings are entered. These pallets contain all mail remaining after required and optional pallets are prepared to finer sortation levels under M045, as appropriate.
- b. Parcel Post mailed at BMC Presort, OBMC Presort, DSCF, and DDU rates. Pallets must meet the requirements specifically prescribed for these rates in M045.

Minimum Load

5.3

These standards apply to:

- a. Periodicals, Standard Mail, and Package Services (except for Parcel Post mailed at BMC Presort, OBMC Presort, DSCF, and DDU rates). In a single mailing, the minimum load per pallet is 250 pounds of packages, parcels, or sacks; or 36 linear feet or three layers of letter trays. In a mailing or mailing job presented for acceptance at a single postal facility, one overflow pallet with less than the required minimum may be prepared for mail destined in the service area of the entry facility; that pallet must be properly labeled under M045. Exceptions: There is no minimum load for pallets entered at a destination delivery unit if the mail on those pallets is for that unit's service area. For mail entered at an SCF, the SCF manager must authorize in writing preparation of any 5-digit, 3-digit, or SCF pallet containing less than the minimum required load if the mail on those pallets is for that SCF's service area.
- b. Parcel Post mailed at BMC Presort, OBMC Presort, DSCF, and DDU rates. A minimum load for the rate claimed may be stated in terms of weight, combined piece minimum and weight, or minimum height. M045 specifies

separate minimum mail heights for machinable parcels and for nonmachinable parcels claimed at OBMC Presort and BMC Presort rates. Mail entered at the Parcel Post DSCF rates and prepared directly on pallets or in pallet boxes on pallets must be prepared under either a minimum height requirement or under one of two options requiring a minimum number of pieces and pounds per pallet under M045. There is no minimum weight requirement for an SCF pallet containing 5-digit scheme and 5-digit sacks prepared for the DSCF rate under M710 (see M045). There are no minimums for the Parcel Post DDU rate.

Minimum Height of Mail

5.4

The definitions of the minimum height of mail used to qualify for OBMC Presort, BMC Presort, and DSCF Parcel Post rates are as follows:

- a. Machinable parcels. The minimum height of mail in a pallet box is the shortest vertical distance measured from the bottom of a pallet box to the top of the lowest mailpiece. The height of the pallet is not included in this measurement.
- b. Nonmachinable parcels. The minimum height of mail on a pallet is the shortest vertical distance measured from the top of the pallet to the top of the lowest mailpiece. The height of the pallet is not included in this measurement.

Maximum Load

5.5

The maximum weight (mail and pallet) is 2,200 pounds. The maximum height of a single pallet (mail and pallet) is 77 inches for packages, parcels, sacks, or pallet boxes, or 77 inches or 12 layers of trays (whichever occurs first) for letter trays. *Exception:* A single pallet that is prepared for entry at Anchorage or Fairbanks, Alaska, has a maximum height of 72 inches (pallet, top cap, and mail).

Mail on Pallets

5.6

These standards apply to mail on pallets:

- a. Pieces in trays, packages, and sacks must be prepared under the standards for the class of mail and rate claimed.
- b. When two or more Periodicals mailings, two or more Standard Mail mailings, or two or more Bound Printed Matter mailings are placed together on pallets, the mailer must keep records for each mailing as required by the standards for the class of mail.
- c. For letter-size Standard Mail and Periodicals prepared in trays on pallets, carrier route rate mail (including automation carrier route) must be prepared on separate 5-digit pallets (5-digit carrier routes pallets) from non-carrier route automation rate or Presorted rate mail (5-digit pallets).
- d. For determining minimum pallet volume, mail in letter trays is measured in full layers of trays or in linear feet. A 2-foot tray equals 2 linear feet; a 1-foot tray equals 1 linear foot.
- e. Heavier, fuller trays must be placed at the bottom of the load.
- f. For Bound Printed Matter irregular parcels, Presorted and Carrier Route rate mail may be combined on all levels of pallet. For Bound Printed Matter flats, Presorted and Carrier Route rate mail may be combined on all levels of pallet except as provided in 5.6g and 5.6h.
- g. For sacks of nonletter-size Periodicals mail on pallets (except for mail prepared with detached address labels), for sacks of nonletter-size Standard Mail on pallets (except for mail prepared with detached address labels and machinable parcels), and for sacks of flat-size Bound Printed Matter, carrier route rate mail must be prepared on separate 5-digit pallets (5-digit carrier routes pallets) from automation rate or Presorted rate mail (5-digit pallets).

- h. For Periodicals flats and irregulars, Standard Mail flats, and Bound Printed Matter flats, packages of carrier route rate mail must be prepared on separate 5-digit pallets from automation and Presorted rate mail. *Exception:* For Periodicals and Standard Mail, under the standards in [M920](#), [M930](#), and [M940](#), carrier route rate, automation rate, and Presorted rate packages can be combined onto the same merged 5-digit scheme pallet and merged 5-digit pallet for applicable 5-digit ZIP Codes.
- i. Mailers of nonletter-size Periodicals and flat-size Standard Mail who prepare packages on pallets may copalletize carrier route mail, automation rate mail, and Presorted rate mail on the same merged 5-digit pallet or on the same merged 5-digit scheme pallet under the conditions in [M920](#), [M930](#), and [M940](#).

Sacked Mail
5.7 Mail that is not palletized (e.g., the mailer chooses not to prepare BMC pallets, or the packages do not meet the machinability standards in [M020](#)) must be prepared under the standards for the rate claimed. For Periodicals, the mailer must separately sack packages of each publication that are not palletized under [M045](#) or that are excluded from palletization. Trays that are not palletized must be bedloaded. Sacks (including sacks of packages not placed on pallets) containing packages remaining after all pallets are prepared may be presented with the palletized mail (and reported on the same postage statement) if separated from the palletized portion of the mailing.

Nonconforming
5.8 For a nonconforming mailer (see [1.4](#)) of letter-size mail in trays, the combined height of a pallet and its load cannot exceed six layers of MM or EMM letter trays.

6.0 COPALLETIZED, COMBINED, OR MIXED-RATE LEVEL MAILINGS OF FLAT-SIZE PIECES

General
6.1 Palletized mailings (including combined, copalletized, and mixed rate level mailings) must be prepared under the standards for the class of mail, subject to specific authorization by Business Mailer Support when required.

Application
6.2 The mailer (or publisher or agent) must submit a written request to Business Mailer Support to present the types of pallets described in [6.1](#). A separate request is required for each type of pallet at each location, but multiple, concurrent applications are acceptable. A mailer who cannot meet the minimum palletization standards without copalletizing, combining, or commingling mixed rate mailings might still qualify if the total copalletized, combined, or commingled mailing meets minimum pallet standards. The request must be received at least 30 days before the first mailing and include the names, addresses, and telephone numbers of the mail owner and of the firm or person preparing the mail; a description of the mailing (e.g., size, weight, class, rate, volume, mailing frequency, and postage payment method); the type of authorization requested; and a sample of the applicable documentation under [M045](#) or [M920](#), [M930](#), or [M940](#).

Periodicals Publications
6.3 To combine more than one Periodicals publication on pallets, the mailer must merge and presort copies of all the publications into common packages to achieve the finest presort level for the combined mailing. To copalletize different Periodicals flat-size publications, the mailer must consolidate on pallets all independently sorted packages for each publication to achieve the finest presort level for the mailing. A combined or copalletized mailing prepared under [M045.4.0](#), using package reallocation, may not always result in all packages being placed on the finest pallet level possible. Both combined and copalletized publications must be supported by the documentation required in [M045](#) or [M920](#), [M930](#), or [M940](#).



Preferred Periodicals may be combined with Regular Periodicals only as permitted by standard.

Standard Mail

6.4

To copalletize different Standard Mail flat-size mailings, the mailer must consolidate on pallets all independently sorted packages from each mailing to achieve the finest presort level for the mailing, except that a copalletized mailing prepared under [M045.4.0](#) or [6.0](#) using the package reallocation option may not always result in all packages being placed on the finest pallet level possible. At the time of mailing, the mailer must present computer-generated listings required in [M045](#) or [M920](#), [M930](#), or [M940](#) that include a summary list consolidating the copalletized multiple mailings and a list of the contents of each pallet by ZIP Code and presort level.

Cancellation

6.5

An authorization may be canceled by Business Mailer Support if the mailer does not meet the standards for pallets or the rates claimed or the mailer does not submit information on future mailings as requested by Business Mailer Support. A mailer may appeal canceled authorizations through Business Mailer Support to the Business Mail Acceptance manager, USPS Headquarters.

