

# GENERAL REQUIREMENTS FOR WOOD PALLETS

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**RECORD OF CHANGES**

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**Written:** Michael Bohlen**Approved:** Dan. Eggert

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## 1.0 SCOPE

This document provides the general requirements for pallets and special purpose wood bases used for packaging and load unitization of products being shipped to Snap-on facilities. These requirements are applicable to new construction and reuse of used pallets.

## 2.0 GENERAL REQUIREMENTS

### A. New Pallets

1. Snap-on prefers three sizes of reusable pallets: the 48 x 40 GMA partial 4-way, notched stringer pallet; the EUR-2 1200 x 1000 mm block pallet; and, the EUR-3 1000 x 1200 mm block pallet.
  - a. Pallet sizes are specified in order of *Length x Width*. The width direction is always parallel to the top deck boards.



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2. Prior approval from Snap-on is required to use the following pallet sizes.
  - a. Stringer pallets (ANSI) MH1-2016
    - i. 36 x 36 inches (914 x 914 mm)
    - ii. 40 x 40 inches (1016 x 1016 mm)
    - iii. 40 x 48 inches (1016 x 1219 mm)
    - iv. 42 x 42 inches (1067 x 1067 mm)
    - v. 44 x 44 inches (1118 x 1118 mm)
    - vi. 48 x 36 inches (1219 x 914 mm)
    - vii. 48 x 42 inches (1219 x 1067 mm)
    - viii. 48 x 45 inches (1219 x 1143 mm)
    - ix. 48 x 48 inches (1219 x 1219 mm)
  - b. Block pallets (ISO) 6780
    - i. 800 x 600 mm (31.5 x 23.6 inches)
    - ii. 800 x 1200 mm (31.5 x 47.2 inches)
    - iii. 1100 x 1100 mm (43.3 x 43.3 inches)
    - iv. 1165 x 1165 mm (45.9 x 45.9 inches)
3. Single use pallets are prohibited unless specifically approved by Snap-on.
4. Pallets constructed from corrugated or honeycomb fiberboard, plywood, laminated veneer lumber, or other nonsolid wood materials (partially or completely) are prohibited unless specifically approved by Snap-on.
5. New pallets are to be constructed in accordance with (ANSI) MH1-2016, NWPCA Uniform Standard for Wood Pallets, or (ISO) 6780 using solid wood components unless otherwise noted. Pallets must be debarked, heat treated, certified, and marked according to ISPM 15 (recommend applying the ISPM 15 mark to all four sides).
6. Stringer pallets:
  - a. Must have two 6" or two double 4" top and bottom lead deck boards.
  - b. Must have five 4" interior top deck boards and three 4" bottom interior deck boards.
  - c. Must have 3 or 4 notched stringer boards.
7. Block pallets:
  - a. EUR-2 1200 x 1000 mm must have nine blocks, three stringer boards, nine top deck boards, and five bottom deck boards (17 total). Lower edges of the bottom deck boards shall be chamfered.
  - b. EUR-3 1000 x 1200 mm must have nine blocks, three stringer boards, seven top deck boards, and three bottom deck boards (13 total). Lower edges of the bottom deck boards shall be chamfered.
  - c. Blocks may be made from wood based composite materials meeting the requirements stated in (ANSI) MH1-2016. However, blocks made of laminated veneer lumber or plywood are prohibited.
8. New pallets must have a safe working load of at least 2,200 lbs (1000 kg).

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**B. Used Pallets**

1. The term “Used Pallet” includes any recycled, remanufactured, or repaired pallet that is not made entirely from new lumber.
2. Used GMA 48 x 40 partial 4-way entry stringer pallets are allowed if they meet the following criteria:
  - a. Class 1 or Class 2 as defined by (ANSI) MH1-2016 or NWPCA Uniform Standard for Wood Pallets having all deck boards present and securely attached.
  - b. “Premium A” – a common industry name describing a slightly used and very clean pallet not having repairs, mending plates, companion stringers, or protruding nail heads.
  - c. “Grade #1” or “A Grade” – a common industry name for a repaired pallet in almost new or near original condition. Broken stringers may have been replaced or repaired with metal plates. All damaged deck boards are replaced and nail heads are flush. This is a fairly clean pallet that is structurally sound.
  - d. “Grade #2” or “B Grade” – another common industry name for a used pallet having two or fewer damaged stringers repaired by attaching companion stringers (also known as block stringer, or double stringer). All deck boards must be present, repaired, and securely fastened. Some protruding nail heads are allowed.
3. Used EUR-2 or EUR-3 Block Style pallets are allowed if they meet the following criteria:
  - a. Satisfy the criteria and repair practice stipulated by ISO 18613.
4. Pallets constructed from corrugated or honeycomb fiberboard, plywood, laminated veneer lumber, or other nonsolid wood materials (partially or completely) are prohibited unless specifically approved by Snap-on.
5. Used pallets (including repairs) must be certified, and marked according to ISPM 15 (recommend that the ISPM 15 mark is on all four sides).

**C. Special Purpose Wood Bases**

1. Oversized or uniquely configured products may require special purpose wooden bases other than pallets described above. The application and use of a special purpose wood base must be reviewed and approved by Snap-on prior to use and on an annual basis thereafter.
2. Special purpose wood bases are to be constructed using materials, methods, and fasteners as described for new pallets except that staples are not allowed. The base structure must have minimum working load exceeding twice the product weight.
3. Wood bases must be debarked, heat treated, certified, and marked according to ISPM 15 (recommend applying the ISPM 15 mark to all four sides).
4. Bases constructed entirely or in part from corrugated fiberboard, honeycomb fiberboard, plywood, laminated veneer lumber, and other nonsolid wood materials are prohibited unless specifically approved by Snap-on.

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5. Bases must be capable of being conveyed on standard gravity or powered roller conveyors.
6. Bases must be accessible and safely handled by common mechanical equipment including forklifts, rider pallet trucks, electric pallet jacks, and manual pallet jacks. If this is not feasible, the product must be securely attached, without overhang, to one of the pallets previously described.
  - a. Access to the base for mechanical movement and lifting must safely engage the load center of gravity. Block off any direction greater than 40 inches (1 meter) from the load center of gravity.
7. Bases must have header boards at each end and equivalent sized forklift boards spaced inward at 20 inch (500 mm) increments.
8. Load bearing floor boards shall be placed beneath the products' concentrated load point/area. Table 1 may be used to estimate the size and number of load bearing floor boards needed.
9. A clearance of not less than 1 inch (25 mm) shall be allowed between the item and the closest edge of the base.
10. The bottom boards, in contact with the floor, should be edge chamfered to promote durability.

**Table 1**

**Allowable load (lbs/in) of board width \***

board spacing (inches)	board thickness (inches)					
	3/4	1 1/2	2 1/2	3 1/2	5 1/2	7 1/2
12	57	287	600	1170	2900	5000
18	38	191	400	780	1930	3350
24	29	143	300	590	1400	2500
30	23	115	240	470	1160	2000
36	19	95	200	390	960	1680
42	16	82	170	335	830	1440
48	14	71	150	290	720	1250
54	12	63	130	260	645	1120
60	11	57	120	234	580	1000
66	10	52	110	212	525	910
72	9	48	100	195	480	840
84	8	41	85	140	360	710

\* Ratings for Group I and II softwoods; Spruce, Pine, Fir, & Southern Yellow Pine

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### **3.0 REFERENCE**

1. American National Standard Institute (ANSI) MH1-2016, Standardization of Pallets, Slip Sheets, and other Bases for Unit Loads, 2016
2. National Wood Pallet and Container Association (NWPCA), Uniform Standard for Wood Pallets, 2014
3. Standards for Phytosanitary Measures Publication No. 15 (ISPM 15), Regulations of wood packaging material in international trade.
4. International Organization for Standardization (ISO) 6780, Flat pallets for intercontinental materials handling—Principal dimensions and tolerances
5. International Organization for Standardization (ISO) 18613, Repair of flat wooden pallets
6. Grocery Manufacturers of America (GMA) – Grocery Industry Pallet Specifications

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