

00-S-260A

April 4, 1978

SUPERSEDING

Fed. Spec. 00-S-260

April 26, 1967

FEDERAL SPECIFICATION

SEALING AND PACKAGING MACHINE, PLASTIC FILM

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE

1.1 Scope. This specification covers a machine to automatically wrap and heat-seal packages using plastic film.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

Federal Specifications:

PPP-B-601	- Boxes, Wood, Cleated-Plywood
PPP-B-636	- Boxes, Shipping, Fiberboard
PPP-C-650	- Crates, Wood, Open and Covered
PPP-T-60	- Tape: Packaging, Waterproof
PPP-B-20	- Bag, Cotton, Mailing

Federal Standard:

FED-STD-123	- Marking for Shipment (Civil Agencies)
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(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, Handbooks, and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Specifications:

- MIL-C-104 - Crates, Wood; Lumber and Plywood Sheathed, Nailed and Bolted
- MIL-P-116 - Preservation-Packaging, Methods of
- MIL-P-121 - Barrier Material, Greaseproofed, Waterproofed, Flexible

Military Standards:

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-1186 - Cushioning, Anchoring, Bracing, Blocking, and Waterproofing; With Appropriate Test Methods

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply:

National Electrical Manufacturer's Association (NEMA) Standard

Standards Publication for Industrial Control, ICI

MG-1 Motors and Generators

(Application for copies should be addressed to the National Electrical Manufacturer's Association, 155 East 44th Street, New York, NY 10017.)

National Fire Protection Association Standard

No. 70 - The National Electrical Code

(Application for copies should be addressed to The National Fire Protection Association, 60 Batterymarch Street, Boston, MA 02110.)

Underwriters Laboratories Inc. (UL)

Electrical Construction Materials List

(Application for copies should be addressed to the Underwriters Laboratories Inc., 207 East Ohio Street, Chicago, IL 60611; Walt Whitman Road, Melville, Long Island, NY 11749; 1655 Scott Boulevard, Santa Clara, CA 95050.)

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

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3. REQUIREMENTS

3.1 Standard product. The sealing machine delivered under this specification shall be the manufacturer's standard commercial product, except for any changes necessary to comply with specification requirements.

3.2 Code and standards.

3.2.1 Compliance. The sealing machine shall comply with the following:

(a) The electrical control components shall conform to the National Electrical Manufacturer's Association (NEMA) Standards Publication for Industrial Control (latest issue as of contract date) or to the standards of the Underwriters Laboratories Inc. (UL), as applicable.

(b) The electrical materials and components shall conform to the Standards of the Underwriters Laboratories Inc. (UL), as applicable.

(c) The installation of the electrical components shall conform to the applicable requirements of National Fire Protection Association (NFPA) Standard No. 70, The National Electrical Code.

3.2.2 Certification. When requested, the supplier shall submit satisfactory evidence to the contracting officer, or his authorized representative that the sealing machines he proposes to furnish under this specification meet the requirements specified in 3.2.1.

3.2.2.1 NFPA and NEMA. Acceptable evidence of meeting the requirements of NFPA Standard No. 70 and current NEMA Standards shall be the manufacturer's certified statement that the sealing machine conforms to the applicable requirements.

3.2.2.2 UL. Acceptable evidence of meeting the requirements of Underwriters Laboratories Inc., shall be the UL Label, a listing in the UL "Electrical Construction Materials List" with re-examination or a certified test report from a recognized independent testing laboratory, acceptable to the Government, indicating that the electrical materials and components offered have been tested and conform to the applicable UL Standards.

3.3 Materials. The materials shall conform to the referenced specifications and to the requirements specified herein. Where materials are not definitely specified, they shall be of the quality normally used for the purpose in commercial practice (see 6.4).

3.4 Design and construction. The sealing and packaging machine shall be designed to automatically inclose and seal hand fed packages in an envelope of plastic film. The plastic film shall be center-folded and dispensed from a roll mounted on the machine. The frame of the machine shall be steel and mounted on four legs. When specified (see 6.2), the machine shall be provided with 2-1/2 inch (63.5 mm) minimum diameter rubber tired casters equipped with brakes. The foot brakes shall prevent the machine from moving when tested as specified in 4.3.2. The operating surface of the machine shall be steel and shall be a minimum of 30 inches (762 mm) in height, a maximum of 50 inches (1270 mm) in width, and a maximum of 66 inches (1676 mm) in depth. The overall height of the machine shall be a maximum of 84 inches (2133 mm). There shall be a stand and a dispensing system for the plastic film. A horizontal set of gripping jaws shall be mounted flush with the operating surface of the machine and a vertical set of jaws shall be mounted below the operating surface of the table.

3.4.1 Plastic film dispensing mechanism. The dispensing mechanism for the plastic film shall consist of an adjustable stand to hold various length rolls up to a maximum of 20 inches (508 mm) of double plastic film, a series of bars and rollers to adjust and maintain the required tension in the film, a set of anti-static bars, and a spreading fork to separate the two sides of the doubled film.

3.4.2 Sealing and cutting mechanism. The sealing and cutting mechanism shall consist of a set of horizontal gripping jaws and a sealing and cutting blade and a set of vertical gripping jaws and sealing and cutting blade. The horizontal blades shall seal both the top of one filled envelope and the bottom of the next envelope and cut off the upper package from the lower package. The vertical blade shall seal the front side edge of the envelope and also cut off any excess material. The sealing and cutting mechanism shall be operated by either a lever or pushbutton mounted on the side of the machine for convenient left hand operation, or by automatic or foot operated means in accordance with the manufacturer's standard commercial practice. A means shall be provided for connection to an external air supply to be used for cooling of the package after the sealing and cutting operation has been completed to prevent the seal from opening and the sticking together of packages while the film is in a softened state. The cooling air shall be blown onto the package seal through air jets along side the cutting and sealing blade. At the manufacturer's option, cooling water may be circulated through the jaws to cool them and keep the melted plastic from sticking to the surface of the jaws. A timer or other device for controlling and adjusting the operating cycle and temperature of the blades shall be furnished with the machine. Packaging shall be accomplished either by air pressure or electric power, as specified (see 6.2).

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3.4.3 Waste exhaust system. A waste removal system in accordance with the manufacturer's standard commercial practice is required to remove all excess or waste film remaining after the sealing and cutting operation.

3.4.4 Fumes and smoke exhaust system. An exhaust system consisting of an exhaust fan and 6 feet (1.828 m) of not less than 3 inch (76.2 mm) diameter exhaust pipe in accordance with the manufacturer's standard commercial practice shall be furnished to remove fumes and smoke from the machine created by the sealing and cutting operation.

3.5 Performance. The machine shall be capable of packaging various shaped items with minimum dimensions of 2 inches by 2 inches by 1/4 inch thick (51 mm by 51 mm by 6.35 mm thick), and maximum dimensions of at least 18 inches by 16 inches by 2 inches thick (457 mm by 406 mm by 51 mm thick), and with a maximum weight of at least 5 pounds (2.26 kg) per package.

3.5.1 Rate of operation. The sealing machine shall be capable of packaging and sealing 4 representative sizes at a rate of 20 packages per minute when tested as specified in 4.3.1.

3.5.2 Air consumption. For air operation the machine shall be capable of performing at the specified rate with 12 cu. ft. (33.97 m³) of air per minute at 80 psig (551 kPa).

3.6 Electrical requirements. The motors shall conform to NEMA MG-1. Unless otherwise specified (see 6.2), the sealing machine shall operate on a nominal 120 volt, single phase, 60 Hz, alternating current power supply.

3.7 Plastic film. The machine shall operate with a roll of doubled polyethylene or other plastic films suitable for the packages being wrapped. The machine shall operate with films having a minimum thickness of 3/4 mil (.0187 mm) to a maximum thickness of 4 mils (.1016 mm) and in widths sufficient to wrap packages specified in 3.5.

3.8 Safety device. A safety device shall be furnished to reverse the action of the clamping jaws and knife action and shut off the motor if any foreign object is caught between the clamping bars.

3.9 Lubrication. Provision shall be made for proper lubrication of all moving parts requiring lubrication. Seals shall be provided where necessary to prevent leakage of lubricant. Machines shall be constructed so that lubricants will not come in contact with packages and plastic film. At time of delivery, the unit shall be completely lubricated with the manufacturer's standard lubricant.

3.9.1 Lubrication instruction. The supplier shall affix to each machine a corrosion-resisting metal lubrication chart indicating the following:

- (a) All points of the machine requiring lubrication.
- (b) Grade of lubricant required.
- (c) Time interval when lubrication should be accomplished.

3.10 Repair and maintenance. Provisions shall be made for ease of adjustment, service, and replacement of electrical components without disassembly of any major component or equipment. In addition, there shall be easy access to inspect, service, and adjust any component or subassembly without requiring disassembly of any other component or subassembly. When required, a manual shall be provided (see 6.2).

3.11 Finish. The sealing machine shall be finished in accordance with the manufacturer's standard commercial practice.

3.12 Identification marking. Identification shall be permanently and legibly marked directly on the item or on an aluminum, brass, or stainless steel plate firmly affixed to the item. Marking shall be stamped, embossed, engraved, or etched. The plate thickness shall be not less than 0.012 inch (0.304 mm). The identification plate shall include the marking requirements of UL.

3.13 Workmanship. Threaded fasteners shall be drawn tight and secured to prevent loosening by vibration. Burrs, rough edges, and slivers shall be removed. Welds and brazes shall be smooth, sound, and free from porosity, burn holes, cracks, fractures, and incomplete fusion. All scale and flux deposits shall be removed. Wiring shall be securely fastened, with adequate slack and insulation.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the contractor may utilize his own facilities or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

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4.2 Quality conformance inspection. Sampling for inspection shall be performed in accordance with the provisions set forth in MIL-STD-105, except where otherwise indicated.

4.2.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.2.2 End item inspection. All of the sealing machines offered for inspection at one time shall be considered a lot for the purpose of inspection. The sample unit for this inspection shall be one completely fabricated sealing machine.

4.2.2.1 Visual examination. The sealing machine shall be examined for defects in table I. The inspection level shall be level II with an AQL OF 2.5 for major defects and 6.5 for total defects, expressed in terms of defects per hundred units.

TABLE I. Classification of defects

Examine	Defect	Classification	
		Major	Minor
Finish	Not finished in accordance with the manufacturer's standard practice	X	
Construction and workmanship general (applicable to all components and assemblies)	Part missing, or not specified type or size	X	
	Fractured, split, bowed, or malformed	X	
	Misplaced, loose, or not in proper alignment	X	
	Sharp burr, sliver, or edge	X	
Welding and brazing	Missing, incomplete, burn holes, cracked, fractured, or not fused	X	
	Slag, inclusion, scale, or flux deposits not removed, not smooth and uniform	X	
Soldering (when applicable)	Missing, not adherent, or incomplete	X	
	Not clean (flux or flux residue not removed)		X
Threaded fasteners	Missing, broken, stripped, fractured, or loose		X

TABLE I. Classification of defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Electrical assembly	Wiring cut, abraded, not properly joined, loose at terminal, or not enclosed in specified conduit where required	X	
	Adequate slack not provided for strain relief or excessive insulation stripped from wiring		X
Lubrication	Not lubricated where required		X
	No lubricant seals where required	X	
	Lubricants coming in contact with packages and film		X
Assembly	Not properly assembled or secured, unit perceptibility out of square or alignment	X	
	Tensioning devices, electrostatic devices, and spreading fork not adjustable	X	
Identification marking lubrication chart	Missing, incomplete, not legible, or not as specified		X

4.2.2.2 Dimensional examination. Inspection shall be made of the end item for compliance with the dimensions specified. Any dimension not within the specified requirements shall constitute a defect. The inspection level shall be S-2 with an acceptable quality level (AQL) of 4.0 defects, expressed in terms of defects per hundred units.

4.2.2.3 Testing of the end item. One representative machine shall be tested as specified in 4.3.1 and 4.3.2, when applicable. Failure to meet specified requirements shall be cause for rejection of the lot.

4.2.3 Code and standards compliance. Proof of compliance with the requirements of 3.2 shall be made available to the Government representative.

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4.2.4 Examination of preparation for delivery. An examination shall be made to determine that preservation-packaging, packing, and marking complies with the section 5 requirements. Defects will be scored as specified in table II. The lot shall be the number of containers offered for delivery at one time. The sample unit shall be one shipping container fully prepared for delivery, except it need not be closed. The inspection level shall be S-2 and the AQL shall be 4.0 expressed in terms of defects per hundred units.

TABLE II. Examination of preparation for delivery

Examine	Defect
Markings (exterior and interior)	Missing; incorrect; illegible; of improper size, location, sequence, or method of application
Preservation	Preservative improperly applied or missing
Materials	Component missing, damaged, or otherwise defective
Workmanship	Bulged or distorted containers Machine not disassembled, when applicable Preservation not as specified Contents of shipping containers not cushioned, anchored, blocked and braced or waterproofed, as applicable

4.2.4.1 Examination of shipping containers. When shipping containers are required to conform to PPP-B-601, PPP-B-636, PPP-C-650, and MIL-C-104, examination for defects in closure, waterproofing and reinforcing shall be in accordance with the appendix of the applicable container specification.

4.3 Tests.

4.3.1 Operating test. The machine shall be connected to the applicable power, water and air sources as specified. The waste exhaust system and the fume and smoke exhaust system shall also be connected. A roll of polyethylene film of the correct length and thickness shall be placed on the machine and prepared for operation. A minimum of one hundred packages shall be placed on the machine and prepared for operation. A minimum of one hundred packages of four representative sizes (a total of 400 packages) shall be used for the test. Four representative sizes are nominal; (1) 2 inches by 2 inches by 1/4 inch thick (51 mm by 51 mm by 6.3 mm thick); (2) 4 inches by 8 inches by 1-1/2 inches thick (100 mm by 200 mm by 38 mm thick); (3) 8 inches by 11 inches by 1/2 inch thick (203 mm by 280 mm by 13 mm thick); (4) 18 inches by 18 inches by 5 inches thick (457 mm by 457 mm by 127 mm thick). The machine shall be turned on and the first lot run through the machine within

5 minutes. The machine shall then be stopped and prepared for the second lot of packages which will then be run through the machine within 5 minutes. The test shall then be repeated for the third and fourth lots of packages. No noticeable smoke or fumes shall be emitted into the room during the operating test. After completion of each lot of packages, the operation of the machine and the completed packages shall be examined for compliance with the requirements of 3.5.

4.3.2 Brake test. With all the brakes set in the ON position, the machine shall be placed at the top of a 5 foot (1.52 m), 5 degree ramp to test the holding power of the brakes as specified in 3.4.

5. PREPARATION FOR DELIVERY

5.1 Preservation-packaging. Preservation-packaging shall be level A or commercial, as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Disassembly and lubrication. The extent of disassembly shall be determined by the manufacturer to reduce cubage or to prevent damage while in transit or storage, and shall be such as not to require special skills or tools during assembly. When casters are required, they shall be lubricated to capacity with the manufacturer's recommended lubricant and containing a rust inhibitor.

5.1.1.2 Preservation. All surfaces subject to corrosion, including detached nuts, bolts, and washers, shall be cleaned process C-1, thoroughly dried, and then coated with preservative conforming to type P-10 of MIL-P-116. Exposed fuses, switches, contacts, motors, and other open exposed electrical components shall be wrapped with barrier material conforming to type I, grade A, class 2 of MIL-B-121 and secured with tape conforming to PPP-T-60 and have all other openings sealed with the specified tape.

5.1.1.3 Packaging. Detached nuts, bolts and washers shall be placed in a cotton cloth drawstring bag; detached components and bagged hardware shall be packaged in a snug-fitting fiberboard box conforming to style RSC, grade weather-resistant of PPP-B-636.

5.1.2 Commercial. Each sealing and packaging machine shall be preserved and packaged in accordance with normal commercial packaging. The complete package shall be designed to protect the machine against damage during shipment, handling, and storage.

5.2 Packing. Packing shall be level A, B, or commercial, as specified (see 6.2).

5.2.1 Level A.

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5.2.1.1 Machines weighing 800 pounds (362 kg) or more. Each machine preserved and packaged as specified in 5.1, shall be packed in a crate conforming to type I, class 1, or 2, style A of MIL-C-104. The fiberboard box containing the detached components shall be placed in an unused portion of its respective crate. The contents shall be blocked, braced, and bolted and the crate closed and strapped in accordance with the appendix of MIL-C-104.

5.2.1.2 Machines weighing less than 800 pounds (362 kg). Each machine preserved and packaged as specified in 5.1, shall be packed in a shipping container conforming to overseas type, style A, B, or J, grade A or B, type 2 load of PPP-B-601. A minimum clearance of 1-inch (25.4 mm) shall be maintained between the top, ends, and sides of the machine, and the interior surface of the shipping container. When casters are required, a minimum clearance of 1/2 inch (13 mm) shall be maintained between the bottom of the casters of the machine and the interior surface of the base of the containers. The fiberboard box containing the detached components shall be placed in an unused portion of its respective shipping container. Each machine and packaged components shall be cushioned and bolted, or blocked and braced in accordance with MIL-STD-1186. Each shipping container shall be provided with skids closed and strapped in accordance with the appendix of PPP-B-601.

5.2.2 Level B (military requirements).

5.2.2.1 Machines weighing 800 pounds (362 kg) or more. Each machine preserved and packaged as specified in 5.1, shall be packed in a crate conforming to style A, type IV, of PPP-C-650, except that the height dimensional limitations shall be waived. The fiberboard box containing the detached components shall be secured in an unused portion of its respective crate. Blocking and bracing or anchoring of contents and closure and strapping of the container shall be in accordance with the appendix of PPP-B-950.

5.2.2.2 Machines weighing less than 800 pounds (362 kg). Each machine preserved and packaged as specified in 5.1, shall be packed, cushioned, anchored, blocked and braced, skidded, closed, and strapped as specified in 5.2.1.2, except that shipping container shall conform to domestic type, style A or B of PPP-B-601.

5.2.3 Commercial. Each machine with its detached components, shall be packed in a wood crate or cleated plywood box to insure safe delivery at destination, to provide for safe redistribution by the initial receiving activity, and be acceptable by common carrier under the National Motor Freight Classification or Uniform Freight Classification. When the gross weight exceeds 200 pounds, the crate or box shall be constructed with skids or a skid base on the bottom panel to provide for access by forklift.

5.3 Marking.

5.3.1 Marking for military requirements. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

5.3.2 Civil agencies. In addition to markings required by the contract or order, the shipping container shall be marked with FED-STD-123.

6. NOTES

6.1 Intended use. The sealing machine covered by this specification is intended for use in sealing and packaging of printed matter such as books, brochures, and catalogs.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Requirement of equipment manuals.
- (c) When casters are required (see 3.4).
- (d) Whether air pressure or electric operation is required (see 3.5.2).
- (e) Electrical requirements, if other than specified (see 3.7).
- (f) Selection of applicable levels of preservation-packaging and packing (see 5.1 and 5.2).

6.3 Environmental. Environmental pollution prevention measures are contained in the material specification referenced herein. Refer to material specification or preparing activity for recommended disposability methods.

6.4 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the specification. (see 3.3).

6.5 Metric equivalents. Metric equivalents, indicated in parentheses throughout this document, are based on practices, conversion factors, and symbols specified in ASTM E 380, Standard for Metric Practice, and are for information only. In each instance the value stated in US customary units shall be controlling.

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MILITARY CUSTODIANS:

Army - GL
Navy - SA
Air Force - 99

Review activity:

Army - MD, M

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS
VA - DMS

PREPARING ACTIVITY:

Army - GL

Project No. 3540-0123

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