PPP-D-142A
January 29, 1973
SUPERSEDING
PPP-D-1427
16 June 1969

# FEDERAL SPECIFICATION

# DUNNAGE, PNEUMATIC, CARGO SHORING

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

## 1. SCOPE AND CLASSIFCATION

1.1 Scope. This specification covers the requirements for two types of pneumatic dunnage bags.

1.2 Classification. The pneumatic dunnage covered by this specification shall be of the following types and nominal working sizes, as specified (see 6.2 and 6.3).

Type I - Disposable

Size 2 - 48 by 48 inches.
Size 3 - 48 by 60 inches.
Size 4 - 48 by 96 inches.

Type II - Reusable

Size 1 - 48 by 48 inches.
Size 2 - 48 by 72 inches.

## 2. APPLICABLE DOCUMENTS

2.1 Specifications and standards. The following secifications and standards 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

| | |
|---|---|
| RR-C-271 | - Chains and Attachments. Welded, Weldless, and Roller Chain. |
| PPP-B-601 | - Boxes, Wood, Cleated-Plywood. |
| PPP-B-636 | - Boxes, Shipping, Fiberboard. |

Federal Standards

| | |
|---|---|
| Fed. Std. No. 123 | - Marking for Domestic Shipment (Civilian Agencies). |
| Fed. Test Method Std. No. 191 | - Textile Test Methods. |

(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, U.S. 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 Federals pacifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Specifications

| | |
|---|---|
| MIL-G-16491 | - Grommet, Metallic. |
| MIL-C-43307 | - Cord, Nylon, Solid Braid, General Purpose. |

Military Standards

| | |
|---|---|
| MIL-STD-105 | - Sampling Procedures and Tables for Inspection by Attributes. |
| MIL-STD-129 | - Marking for Shipment and Storage. |
| MIL-STD-130 | - Identification Marking of US Military Property. |

(Copies of specifications and standards 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.

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification.

(Application for copies should be addressed to the uniform Classification Committee, ATTN: Tariff Publishing Officer, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., ATTN: Tariff Order Section, 1616 P Street, NW, Washington, DC 20036.)

## 3. REQUIREMENTS

3.1 Description. The type I dunnage bag shall be disposable and shall consist of a multiwall outer tube of kraft paper coated with polyethylene, an inner bladder, and inflation valve, and end closures. The type II dunnage bag shall be reusable and shall consist of top and bottom body sections of rubber-coated nylon cloth, a high volume inflation valve, hinge (seam) strip of rubber-coated nylon cord fabric or overlap splice, and reinforcement patches, all of which are joined by vulcanizing into a single unit. Rope handle assemblies shall be laced through grommets attached to the bag or rubber fabric constructed handles vulcanized to the bag for use in handling.

3.2 First article.

3.2.1 Preproduction model The supplier shall furnish one or more preproduction models as specified (see 6.2), consisting of 3 linear yards of uncoated base fabric as a sample and three complete pneumatic dunnage bags

of the type and size specified for examination and test within the time frame specified (see 6.2), to prove prior to starting production that his production methods and choice of design detail will produce dunnage bags that comply with the requirements of this specification (see 6.4). Examination and tests shall be those specified herein.

3.3 Materials. Materials shall be as specified herein. Material not specified shall be selected by the supplier and shall be subject to all provisions of this specification.

3.4 Design and construction.

3.4.1 Type I (disposable).

3.4.1.1 Outer tube. The outer tube shall be constructed from a minimum of SIX piles of 100 pound test extensible-type kraft paper and shall conform to the physical strength requirements of table C, Rule 40, of the Uniform Freight Classification. All longitudinal seams shall have a minimum overlap of 1-1/4 inches and shall be bonded so as to have a strength equivalent to the base paper. The outside of the outer ply shall be uniformly coated with medium density polyethylene. The coating shall be applied at the rate of not less than 0.70 ounce per square yard. The paper the shall be fitted with a brass grommet for the inflation valve to protrude through.

3.4.1.2 Inner bladder. The inner bladder shall be seamless, lay-flat tubing extruded from high-density rubber-modified polyethylene. The film thickness shall be an average of 0.006 inch and at no point shall be less than 0.0054 inch. The tubing shall have a lay-flat dimension not less than the inside dimension of the paper tubing. An inflation valve shall be inserted in the tubing, and the valve and open ends of the tubing shall be heat sealed. Heat seals shall not leak when the bag is tested as specified in 4.5.2.1.2.

3.4.1.3 Inflation valve. The inflation valve shall be a high-volume type constructed of a plastic material compatible with the inner bladder. The valve neck shall extend through the grommet in the outer tube and shall be fitted with a metal, pressure-fit lock-washer to secure the valve in place. The valve shall have a removable, map-fit dust cap. The valve shall be constructed so as to permit manual depression for pressure adjustments and shall be self-seating when the external force is removed. The valve shall not leak when tested as specified in 4.5.2.1.2.

3.4.1.4 End closures. The assembled dunnage bag shall be closed at each end. End closures shall be leak-proof and shall show no evidence of separation

when the dunnage bag is subjected, restrained, to an internal pressure of not less than 12 pounds per square inch gage (psig) when tested as specified in 4.5.2.1.2.

3.4.2 Type II (reusable).

3.4.2.1 Body section. The top and bottom body sections shall be fabricated from coated base nylon cloth as specified in 3.4.2.2 and 3.4.2.3. An opening shall be provided near one corner or edge of the top section for attachment of the inflation valve. Tine top and bottom body sections shall be joined with a coated fabric hinge strip as specified in 3.4.2.4 and 3.4.2.4.1 or by overlapping the bottom panel on the top as specified in 3.4.2.4.2. The joined section shall be vulcanized into one unit. The exterior of the bag may range from an as calendered surface to a rough or knurled surface. When the hinge strip is used, the vulcanized bag shall have a hem of not less than 1-1/2 inches around the periphery. The inflation valve as specified in 3.4.2.5 with reinforcing patches as specified in 3.4.2.6 shall be vulcanized into and become an integral. part of the bag. Grommets (applicable only to bags with rope handle assemblies) shall conform to MIL-G-16491, type III, class 1, size 1, and shall be placed in the hem of the bag. Size 1 bags shall be fitted with two grommets on each edge spaced not less than 9 inches apart around the centerline of the bag. Size 2 bags shall be fitted with two grommets on the two ends the same as for size 1 and four grommets on the two sides. Side grommets shall be centered around a point midway between the centerline and the end of the bag. Rape handle assemblies shall be as specified in 3.4.2.7 and 3.4.2.7.1. Rubber fabric constructed handles shall be as specified in 3.4.2.4.3 and shall be located 6 inches from the edge. Size 1 bags shall have four handles vulcanized to the bag centered on each side of the bag. Size 2 bags shall have one handle centered on each end in the same manner as size 1 bags as well as two handles on each side centered around a point midway between the centerline and the edge of the bag.

3.4.2.2 Coated base cloth. The coated base cloth shall be nylon fabric coated with a heat vulcanizable black synthetic rubber, suitably compounded. Coating compound shall be uniformly applied to both sides of the fabric at the rate of not less than 22.60 ounces per square yard per side. The fully cured cloth shall conform to the requirements of table I.

Table I. Physical requirement of coated base cloth

| | |
|---|---|
| Weight (ounces per square yard) | 60.00 ± 5.00 |
| Breaking strength (Strip, lbs) | |
| Warp | 600 min |
| Fill | 600 min |
| Tearing strength (Tongue, lbs) | |
| Warp | 25 min |
| Fill | 25 min |
| Adhesion of coating (lbs) | 50 min |
| Abrasion taber (No. of cycles per 0.3 gm weight loss) | 1000 |
| Wear through to cloth | 7000 min |
| Blocking rating | No. 1 (no blocking) |

3.4.2.3 Nylon fabric. The fabric shall be single ply woven from 1050 denier, bright, high tenacity nylon. The weave shall be 2 by 2 basket construction, and the fabric shall be heat set. The fabric shall conform to the requirements of table II.

Table II. Physical requirements of fabric

| | |
|---|---|
| Weight (ounces per square yard) | 11.00 ± 0.50 min |
| Threads per inch | |
| Warp | 38 min |
| Fill | 38 min |
| Breaking strength (Strip, lbs) | |
| Warp | 600 min |
| Fill | 600 min |
| Tear strength (tongue, lbs) | |
| Warp | 100 min |
| Fill | 100 min |

3.4.2.4 Hinge fabric. Hinge fabric shall be rubber-coated nylon cord fabric and shall be heat vulcanizable.

3.4.2.4.1 Hinge strip. The hinge strip shall be coated cord fabric as specified in 3.4.2.4. The hinge after vulcanizing shall have a minimum adhesive strength of 35 pounds and a minimum shear strength of 600 pounds.

3.4.2.4.2 Overlap splice. The vulcanized bags shall have an overlap of not less than 2 inches on the sides and end and 1 inch around the radii. The overlap splice, after vulcanizing, shall have a minimum adhesion strength of 35 pounds and a minimum sheer strength of 600 pounds.

3.4.2.4.3 Rubber fabric constructed handles. Rubber fabric constructed handles made from coated base cloth as specified in 3.4.2.2 shall be 3 inches wide and 13 inches long with the center area folded under to make a 1/2-inch wide strip leaving a 3-inch square at each end for vulcanizing to the top panel of the bag as specified in 3.4.2.4.4.

3.4.2.4.4 Vulcanizing handle to bag. Handles shall be located as specified in 3.4.2.2. The 3-inch square ends shall be attached so that the handle occupies 11 inches from end to end. After vulcanizing, the handle shall have a minimum adhesion strength of 35 pounds and a minimum sheer strength of 600 pounds.

3.4.2.5 Inflation valve. The inflation valve shall be a high-volume type constructed of corrosion-resistant metal with a removable cap assembly to permit rapid inflation and deflation of dunnage bags. A removable cap assembly shall be fitted with a check plate or disc to minimize air loss when measuring inflation pressure. The check plate or disc, when the cap assembly is inserted, shall permit manual actuation for checking of internal air pressure and for controlling deflation in order to adjust internal. air pressure. The check plate or disc shall automatically seat when external pressure is removed. The cap assembly shall be secured to the valve body by a brass chain as specified in 3.4.2.5.1. The chain shall not interfere with actuation of the valve or removal of the cap assembly. The removable cap assembly shall have a knurled surface to facilitate gripping.

3.4.2.5.2 Valve chain. The valve chain shall confom to RR-C-271, type II, class 8, brass, 0.135-inch diameter and 4 to 5 inches long.

3.4.2.6 Reinforcement patches. Reinforcement patches shall be provided on the inner and outer surfaces of the bag in the area around the valve. Patches shall be of the same material as the body sections and shall be vulcanized to the top section.

3.4.2.7 Rope handle assemblies. Rope handles shall be constructed from 1/4-inch nylon cord as specified in 3.4.2.7.1. Cord for each handle shall be not less than 24 inches long. Handles shall be attached to the completed dunnage bags by threading the cord through two adjacent grommets and knotting each end to prevent the cord from pulling back through the grommet. Size 1 bags shall be fitted with four handles and size 2 bags shall be fitted with six handles.

3.4.2.7.1 Rope. Rope shall be 1/4-inch diameter braided nylon sash cord conforming to MIL-C-43307.

3.4.2.8 Repaired defects. Damaged areas of type II dunnage bags may be repaired by use of patches constructed of the coated base cloth specified in 3.4.2.2. No more than two patches shall be applied to a bag. Each patch shall be no more than 12 inches square in area and shall overlap the damaged area by not less than 2 inches. No patch shall be closer than 2 inches to the body seam. Patches shall be pressure vulcanized to the bag and shall adhere with no free edges. Patches shall e neat and shall not affect the performance or serviceability of the bag.

3.5 Permeability. The completely assembled type I and type II dunnage bags shall lose not more than 0.2 pounds pressure in 24 hours when inflated to a pressure of 6 psig unrestrained, after an initial prestretch for 1 hour at a pressure of not less than 6 psig, when tested as specified in 4.5.2.1.

3.5.1 Strength. The type I and type II dunnage bags shall not burst or show any evidence of leakage when pressurized to not less than 12 psig restrained for 15 minutes at a rate of not more than 10 psig per minute.

3.6 Identification marking.

3.6.1 Type I (disposable). The type I dunnage bag shall be identified in accordance with MIL-STD-130. Marking shall be stenciled or printed legibly and permanently on the dunnage bag or dunnage carton and shall include “Type I - DISPOSABLE” .

3.6.2 Type II (reusable). Marking shall be applied to the type II dunnage bag by means of a molded patch permanently affixed to the assembly. The patch shall be bonded in a manner that shall not be injurious to the bag. Nomenclature applied to bag shall include “TYPE II - REUSABLE”. Each bag shall be assigned a unique serial number which shall be included on the identification patch.

3.6.2.1 Warning plate. Type II dunnage bags shall be provided with a molded patch permanent affixed adjacent to the valve. The following information shall be contained on the patch:

WARNINGS
DO NOT INFLATE MORE THAN
6 PSI UNRESTRAINED, 10 PSI
RESTRAINED
TIGHTEN VALVE BY HAND
DO NOT USE TOOLS.
REPLACE VALVE CAP AFTER
DEFLATION

The lettering shall be not less than 3/16 inch high and shall be distinct and legible so as to attract the attention of operating personnel. The patch shall be bonded in a manner that will not be injurious to the coated fabric.

3.7 Workmanship. All worbmanship on each dunnage bag shall be in accordance with the engineering, manufacturing, and production standards and practices. Dunnage bags shall be free from workmanship deficiencies that could impair the operation or use thereof. All part of assembly involving seals, moldings, extrusions, and reinforcement patches shall be clean and free of holes, brittle areas, dirt, grease, oil, or other harmful extraneous material. Any plastic, metal, or welded parts shall be clean and free of cracks, insecure bonding, burrs, and sharp edges.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase orders the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own 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.

4.1.1 Acceptability criteria. Dunnage bags which conform to all requirements in sections 3 and 5 of this specification and pass all applicable examinations and tests in section 4 of this specification will be considered acceptable by the Government.

4.2.2 Component and material inspection. The supplier is responsible for insuring that components and materials used are manufactured, examined, and tested in accordance with -referenced specifications and standards.

4.2 Classification of inspection. Inspection shall be classified as follows :

(a) Preproduction inspection (see 4.3).
(b) Quality conformance inspection (see 4.4).
(c) Inspection of preparation for delivery (see 4.6).

4.3 Preproduction inspection.

4.3.1 Examination. The preproduction dunnage bags and samples shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. The preproduction dunnage bags and samples shall be tested as specified in 4.5.2.1 through 4.5.2.2.3, as applicable. Failure of any test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Sampling. Sampling for examination and tests shall be in accordante with MIL-STD-105.

4.4.2 Examination. Samples selected in accordance with 4.4.1 shall be examined as specified in 4.5.1. The inspection level shall be II with an acceptable quality level (AQL) of 2.5 major and 6.5 total.

4.4.3 Tests. Samples selected in accordance with 4.4.1 shall be tested as specified in 4.5.2.1.1 and 4.5.2.1.2. The inspection level shall be S-4 with-an AQL of 2.5.

4.5 Inspection procedure.

4.5.1 Examination. Examination shall be in accordance with table III.

Table III. Examiniation schedule

| Classification | Examine | Defects |
|---|---|---|
| MAJOR | General: | |
| 101 | Dimensions | Not as specified. |
| 102 | Construction and workmanship | Component missing or not type or design specified. Component misplaced. |
| | Type I (Disposable) | |
| 103 | Kraft paper | Not as specified. |
| 104 | Seam overlap | Not as specified. |
| 105 | Polyethylene coating (outside of outer ply). | Missing, holes, brittle areas, not applied as specified. |
| 106 | End closures | Not as specified. |
| 107 | Bladder thickness | Not 0.006 inch average and is less than 0.0054 inch at one or more points. |

Table III. Examination schedule (Cont'd)

| Classification | Examine | Defects |
|---|---|---|
| 108 | Heat seals | Evidence of leakage. |
| 109 | Inflation valve | Material not compatible with bladder. |
| 110 | Inflation valve | Neck does not protrude through outer tube, is not secured in place. |
| | Type II (Reusable) | |
| 111 | Nylon fabric | Weave not as specified; nylon not 1050 denier. |
| 112 | Coated base cloth | Area of no coating, thin coating, or coating tacky. |
| 113 | Coated base cloth | Hole, tear, burnt spot, cracks, or brittle area; pits or abraded area or coating separation exposing nylon fabric. |
| 114 | Coated base cloth | Incomplete adhesion of coating, blister, peeling or delamination. |
| 115 | Hinge (overlap or seam) fabric | Not as specified. |
| 116 | Valve chain | Length not as specified. |
| 117 | Rope | Diameter and length not as specified. |
| 118 | Assembled bag | Evidence of delamination, not vulcanized. |
| 119 | Assembled bag | Delamination in seam or overlap, seam or overlap not bonded. |
| 120 | Assembled bag | More than 2 repair patches. Repair patch not same material as base fabric. |
| 121 | Assembled bag | Repair patch over 12 square inches in area. |
| 122 | Assembled bag | Repair patch not bonded to fabric, not vulcanized, or can be peeled. |
| 123 | Marking (warning plate) | Missing, not attached as specified, or not a molded patch. |
| MINOR | | |
| | Type I | |
| 201 | Finish (exterior) | Area of no coating, wrong color. |
| 202 | Marking | Missing, illegible, not as specified. |

Table III. Examination Schedule (Cont'd)

| Classification | Examine | Defects |
|---|---|---|
| | Type II | |
| 203 | Assembled bag coated base fabric | Color not as specified. |
| 204 | Assembled bag coated base fabric | Foreign matter embedded in coating, coating not uniform. |
| 205 | Hem | Hem not as specified. |
| 206 | Repair patches | Repair patch closer than 2 inches to seam or overlap. |
| 207 | Identification | Incorrect, wrong location, not legible or not type or size specified. |

4.5.2 Tests.

4.5.2.l Conditioning of test specimens. Prior to permeability and strength testing of the preproduction model, the uninflated bags shall be exposed to temperature of 73.4° plus or minus 3.6° F. and relative humidity of 50 percent plus or minus 2 percent for a period of not less than 24 hours.

4.5.2.1.1 Permeability. Inflate the bag unrestrained, to a pressure of not less than 6 psig. Allow the bag to remain in this condition for 1 hour. At the end of the 1-hour period, adjust the inflation pressure to 6 psig. Measure and record temperature and barometric pressure of the environment. Allow the bag to stand for not less 24 hours. At the end of the 24-hour period, measure the inflation pressure of the bag and the temperature and barometric pressure of the environment. Correct inflation pressure for temperature and barometric changes and determine inflation pressure loss. A pressure loss of more than 0.2 psig shall constitute failure of this test.

4.5.2.1.2 Strength. Pressurize the bag, utilizing air, to not less than 12 psig in a restrained condition in a 12 inch void. Examine the bag for leaks and evidence of seam or closure separation by covering the bag with a thin film of soapy water. Rupture of the bag, leakage, or evidence of separation or damage shall constitute failure of this test. Type I disposable bags only shall be destroyed upon successful completion of strength test.

4.5.2.2 Type II components.

4.5.2.2.1 Nylon fabric. Subject the nylon fabric to the tests listed in table IV, utilizing the applicable test methods in accordance with Fed. Test Method Std. No. 191. Nonconformance to the referenced requirement shall constitute failure of that test.

Table IV. Nylon fabric

| Test | Reference Requirement | Method Number |
|---|---|---|
| Weight | Table II | 5041 |
| Threads/inch | Table II | 5050 |
| Breaking strength | Table II | 5104 |
| Tearing strength | Table II | 5134 |

4.5.2.2.2 Coated base cloth. Subject the coated base cloth to the tests listed in table V, utilizing the applicable test methods in accordance with Fed. Test Method Std. No. 191. Test specimens shall be from a completed dunnage unit. Nonconformance to the referenced requirements shall constitute failure of that test.

Table V. Coated base cloth

| Test | Reference Requirement | Method Number |
|---|---|---|
| Weight | Table I | 5041 |
| Breaking strength (Warp and fill) | Table I | 5102 |
| Tearing strength (Warp and fill) | Table I | 5134 |
| Adhesion of coating | Table I | 5970 |
| Abrasion - Wheels shall be H-18 w/1000 gram weights per wheel | Table I | 5306 |
| Blocking - Test specimen shall consist of two 4 by 4 inch pieces placed squarely one on top of the other | Table I | 5872 |

4.5.2.2.3 Hinge strip or overlap seam. Subject seam specimens, removed from a complete dunnage bag, to tests in accordance with test method numbers 5102 and 5962 of Fed. Test Method Std. No. 191. For test method number 5102 the specimen shall be 1 inch by 6 inches with hinge strip centered in such a manner that when the load is applied in the long direction of the specimen, a shearing action takes place at the hinge strip. Nonconformance to 3.4.2.4.1 shall constitute failure of this test.

4.6 Inspection of preparation for delivery.

4.6.1 Quality conformance inspection of pack.

4.6.1.1 Unit of product. For the purpose of inspection, a completed pack prepared for shipment shall be considered a unit of product.

4.6.1.2 Sampling. Sampling for examination shall be in accordance with MIL-STD-105.

4.6.1.3 Examination. Samples selected in accordance with 4.6.1.2 shall be examined for the following defects. Inspection level shall be S-2, and the AQL shall be 2.5 percent defective.

| | | |
|---|---|---|
| 124. | Containers not as specified for level A or B. Each incorrect container shall constitute one defect. |
| 125. | Strapping not zinc coated for level A. |
| 126. | Marking missing, illegible, incorrect, or incomplete. |

5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A, B, or C, as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Type I. Each type I dunnage bag shall be folded or rolled to form a compact bundle in accordance with the supplier's recommendation, and the bundle shall be packaged in a close-fitting box conforming to PPP-B-636, W6c.

5.1.1.2 Type II. The type II dunnage bags shall not require packaging.

5.1.2 Level B.

5.1.2.1 Type I. Each type I dunnage bag shall be packaged as specified in 5.1.1 except the box shall be type CF, class domestic, variety SW, grade 175, style optional.

5.1.2.2 Type II. The type II dunnage bags shall not require packaging.

5.1.3 Level C. The dunnage bags shall be packaged to afford protection against deterioration and damage from the supplier to the initial. destination.

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

5.2.1 Level A.

5.2.1.1 Type I. The type I dunnage bags, packaged as specified in 5.1, shall be packed together in a close-fitting box conforming to PPP-B-601, overseas type, style optional. Box closure and strapping shall be in accordance with the appendix to the box specification. Strapping shall be zinc coated, and on boxes provided with skids the strapping shall be placed adjacent to the skids.

5.2.1.2 Type II. The type II dunnage bags shall be folded, rolled, or laid flat in accordance with supplier's recommendation and the bags packed together as specified in 5.2.1.1.

5.2.2 Level B. The dunnage bags shall be packed as specified in 5.2.1 except the shall be domestic type, and strapping is not required to be zinc coated.

5.2.3 Level C. The dunnage bags, packaged as specified in 5.1, shall be packed to assure carrier acceptance and safe delivery to destination at lowest rating in compliance with the Uniform Freight Classification rules or National Motor Freight Classification rules.

5.3 Marking. In addition to any special marking required by the contract or order, the interior packages and shipping containers shall be marked in accordance with Fed. Std. No. 123 or MIL-STD-129, as specified (see 6.2).

6. NOTES

6.1 Intended use. The dunnage unit is a lightweight inflatable air bag used in place of timber shoring for tightening and cushioning loads, absorbing impact shocks, and reducing load vibration during transit. It is capable of being positioned and inflated by one man and may be used singly or in series to restrain loads or fill voids in the carrier. Type I units are designed for “one time use” and should not be reused.

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) Type and size dunnage required (see 1.2).
(c) Time frame required for submission of preproduction model and number required (see 3.2.1).

(d) Level of packaging and packing required (see 5.1 and 5.2). Level B packaging is intended to provide economical but limited protection and should be specified only when it is determined the dunnage bags will be held in covered storage.
(e) Whether marking in accordance with Fed. Std. No. 123 or MIL-STD-129 is required (see 5.3).

6.3 Classification change. Type I, size 1 dunnage has been deleted since there is no longer a requirement for this size.

6.4 Preproduction model. Any changes or deviations of production dunnage bags from the approved preproduction model during production will be subject to the approval-of the contracting officer. Approval of the preproduction model will not relieve the supplier of his obligation to furnish dunnage bags conforming to this specification.

6.5 Data requirements. The contracting officer should include requirements for such data as technical publications, instructional materials, illustrated parts lists, and supplier's maintenance and operation manual to be furnished with each type of dunnage bags.

6.6 Provisioning. The contracting officer should include provisioning requirements for repair parts and maintenance tools as necessary (including any special tools), and instructions on shipment of dunnage bags. A suggested paragraph is as follows:

"Shipment of dunnage bags shall include repair parts, maintenance tools, operation, instructions, and accessories, unless exceptions are provided elsewhere in the contract."

MILITARY INTEREST

Custodians:

Army - ME
Navy - SA

User activities:

Army-MU
Navy - YD, AS, SH, OS, MC

CIVIL AGENCIES INTEREST

GSA

Preparing activity:

Army - ME

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Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 20 cents each.

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

Form Approved
Budget Bureau No. 22-R255

INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

SPECIFICATION PPP-D-1427A Dunnage, Pneumatic, Cargo Shoring

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

☐ YES ☐ NO *(If "yes", in what way?)*

4. REMARKS *(Attach any pertinent data which may be of use in improving this specification. If there are additional papers attach to form and place both in an envelope addressed to preparing activity)*

SUBMITTED BY *(Printed or typed name and activity - Optional)*

DATE

DD FORM 1426
11 Oct 72 (Rev)

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.

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