MARKING INSTRUCTIONS FOR BOXES, SACKS, AND UNIT LOADS OF PERISHABLE AND SEMIPERISHABLE SUBSISTENCE

A. GENERAL INSTRUCTIONS

1. COMMERCIAL CONTAINERS

   a. When subsistence items are purchased in commercial containers, the identification, contract data and precautionary markings may be retained. This data will be considered as complying with the marking requirements irrespective of order or location so long as:

      (1) The commercial markings are legible, non-fading, durable, and provide contrast with the container.

      (2) All required data is located on an end/and or side panel(s), except for precautionary markings, which shall be on the side panels or the top panel.

      (3) No advertising matter or case marking for products or manufacturer, other than being purchased, appear on the container.

   b. Any data required in Section D, which is not included in the commercial markings must be added. All added information shall:

      (1) Comply with the requirements of Section C.

      (2) Comply with the requirements of Section D except for order. NSN, contract number, Armed Forces Symbol for Subsistence and bar code symbol must be on an end or side panel.

2. OTHER CONTAINERS

   When subsistence items are purchased in other than preprinted commercial containers, markings shall comply with Sections C and D.

B. APPLICABLE DOCUMENTS

1. Government Documents:

   Military:

   MIL-PRF-61002 – Pressure-Sensitive Adhesive Labels for Bar Coding

   MIL-STD-129P w/Change 4 --- Military Marking For Shipment And Storage

   DOD Regulations:

   DOD 4500.9-R --- Defense Transportation Regulation (DTR)

2. Non-Government:
   International Organization Standards (ISO)
   International Electro technical Committee (IEC)
   Material Handling Industry of America (MHIA)

   MHIA MH10.8.2 – Data Identifier & Application Identifier Standard
   ISO/IEC 15434 - Information Technology – Transfer Syntax for High Capacity ADC Media
   ISO/IEC 15438 – Information Technology – Automatic Identification and Data Capture Techniques – Bar Code Symbology Specification–PDF417
   ISO/IEC 16388 – Information Technology- Automatic Identification and Data Capture Techniques – Bar Code Symbology Specification–Code 39
   (Application for ISO/IEC copies should be addressed to The American National Standards Institute, 25 West 43rd Street, New York, NY 10036 or through www.iso.ch)

C. METHOD AND SIZE OF MARKING

1. METHOD OF MARKING
   a. The marking of intermediate containers, shipping containers, sacks/bags and unit loads shall be accomplished by use of labels, ink jet printing, stamping, photo marking, embossing, decals, transfers, laser marking or other similar processes (dot matrix or conventional methods are acceptable). Hand lettering or hand printing shall not be used except for delivery order numbers and weight and cube declarations.
   NOTE: When adhering paper labels to shrink-wrapped shipping containers, the labels shall be affixed to the shipping containers prior to applying the shrink-wrap.

   b. All markings shall be legible, non-fading and durable. The markings shall contrast with the applied surface.

c. Commercial enamels, lacquers or inks shall be used for lithographing, embossing, roller coating, jet printing or stamping. When stamping is applied, commercial waterproof and petroleum resistant inks, offering durability on exposure to field service, shall be used.

NOTE: Enamels, lacquers or inks shall not be applied to fiberboard, chipboard or any other porous type packaging material that may come into direct contact with a food item unless the FDA has declared the marking material a Food Grade Material.

d. Labels may be used for address markings, identification and contract data markings, regulation / statue markings, and International Logistics shipment markings. When labels are used, the required markings shall be printed, typed or reproduced. When labels are used for identification and contract data, the markings shall be of the size specified herein, and shall be a size that permits ready identification. Labels for Level A and B packs, except pressure sensitive labels, shall be secured with water resistant adhesive. Labels for commercial applications shall be securely affixed with adhesive in accordance with good commercial practice. Labels for Level A pack shall be waterproofed by coating the entire label and adjacent surfaces with a water proof material. Waterproof pressure sensitive labels (waterproof adhesive backing and printed surface) do not require waterproof coating as described above. When labels are used for other than ration items, the color of the labels may be white. If labels are applied to ration items, the color shall be an earth tone color such as a tan, beige, brown or green.

e. Tags. A metal, cloth, plastic or paper shipping tag shall be used whenever it is impracticable to stencil, mark or apply a label. For Level A and B packs, water resistant paper tags shall be used. Metal shipping tags shall be corrosion resistant. Tags shall be attached with wire (minimum 23 gauge) or twine. Markings on cloth or paper tags shall be printed with waterproof ink or typed; metal tags with dies or punches; plastic tags by means of stamping, stenciling, printing, perforating or embossing.

2. SIZE OF MARKINGS

a. Lettering shall be in capital letters of equal height.

b. Interrupted stencil shipping case markings shall be minimum 7/16 inch. Solid letter shipping case markings shall be minimum 3/8 inch. Solid letter markings may be reduced to ¼ inch when panel space is insufficient for the larger markings. Markings applied by non-contact methods (e.g. ink jet, laser, etc.) shall be minimum ¼ inch.

c. Markings on shipping sacks shall be minimum 3/8 inch.

d. Label Markings (shipping containers)
Lettering for identification and contract data markings shall not be less than ¼ inch (solid or dot matrix letters).

e. Tags (shipping containers). Markings on paper, plastic, or cloth tags shall be a minimum of 1/8 inch. Markings on metal tags shall be minimum of 3/16 inch.

f. Unit load markings shall be minimum ¾ inch.

D. IDENTIFICATION, CONTRACT DATA, AND SPECIAL MARKINGS

1. INTERMEDIATE CONTAINERS.

a. Unless otherwise specified, intermediate containers shall be marked or labeled on one end or side panel with the following information.

Item Name (e.g. TEA, INSTANT)
Quantity, Size & Unit (e.g. 50 ¾ OZ PG)

b. Intermediate container is an interior container, bundle or wrap which contains two or more unit packages of identical items, and which is subsequently packed in a shipping container.

2. SHIPPING CONTAINER IDENTIFICATION AND CONTRACT DATA

a. On one end panel mark the information listed below as shown in Figure 1 & 2. When end panel space is insufficient to allow for all the required markings, all or the remaining markings shall be stenciled or printed on the side panel.

NOTE: The identification/contract data markings, cited below, and bar code markings may be displayed on separate display panels. This is permitted when any one panel is too small to accommodate both sets of markings.

b. SEMI-PERISHABLE (ISSUE) 1/ (See Figure 1)

Line 1 – NSN (National Stock Number) (e.g. 8915-00-257-3947)
Line 2 – Item Description or Name (e.g. CORN, CANNED)
Line 3 – Quantity, Size and Unit (e.g. 6 NO. 10 CNS) or Net Weight (e.g. NET WT. 42 lbs.) as appropriate.
Line 4 – Contract or P.O. Number, Delivery Order Number 2/(when applicable) and Lot Number 3/
(e.g. SP0300-10-C-0001, LOT 26 or SP0300-10-C-0001-D027, LOT 26)
Line 5 – Name, Address, and Zip Code of Contractor.
(e.g. TEFCO, INC., BROOMALL, PA 19101)
Line 6 – Date of Pack 4/ (Month/Year)
(e.g. DOP 5/10) or (Julian Date) (e.g. DOP 3145)
Line 7 – Inspection/Test/Date 5/ ------ --------- ------- 6/

1/ Inspection/Test Date is not required for shipment when ration components are shipped to ration assembly points.

2/ Delivery order numbers may be hand lettered. Hand lettering shall be legible and marked with non-fading, durable ink.

3/ Contractor shall mark the applicable lot number by embossing, stamping, printing, stenciling, jet or laser printing on each primary container and/or shipping container thus identifying the involved lot from all other lots produced by the same contractor. Lot numbers will not be mixed on the same pallet except for end of shift/partial lot quantities. Unit load markings shall reflect all involved lot numbers.

4/ The date of pack is that date on which the product was packaged in the unit/primary container.

5/. Expected shelf life is found in the applicable solicitation/contract. To calculate Inspection Test Date (ITD), add shelf life value to Date of Pack. Example 1: If Date of Pack is June 2001 and shelf life is four months, then ITD is computed as follows:

6/01 + 4 = ITD 10/01

Example 2: If Date of Pack is September 2001 and shelf life is six months, then ITD is computed as follows:

9/01 + 6 = ITD 03/02

6/ Three spaces shall be provided for additional inspection/test dates.

c. PERISHABLE (ISSUE) (See Figure. 2)

Line 1 - NSN (National Stock Number) (e.g. 8915-00-127-7984)
Line 2 - Item Description or Name (e.g. BEANS, LIMA, FROZEN)
Line 3 – Total Net Weight 1/ 2/ (e.g. 50 LB NET WT) or quantity, size and unit applicable to items purchased by volume rather than by weight (e.g. 24 – 12 FLUID OZ CNS) and Date of Pack 3/ 4/ (month, day and year; e.g. DOP 7/6/03) or Julian date (year and day; e.g. DOP 3116)
Line 4 – Contractor P.O. Number, delivery order number 5/ (when applicable) and lot number 6/.
(e.g. SP0300-03-C-0001, LOT 26 or SP0300-03-C-0001-D027, LOT 26.)
Line 5-Name, Address, and Zip Code of Contractor
(e.g. JABCO,INC.,DREXEL HILL,PA 19026)

1/ Unless otherwise specified in the contract or order, the net weight shall be expressed in pounds to the nearest greater whole pound.

2/ Net weights are not required on shipments of perishable items purchased by volume, i.e. frozen juice, milk, ice cream, etc.

3/ The DOP, applied to frozen fruit and vegetable containers, need only indicate month and year.

4/ The date of pack is that date on which the product was processed and/or packaged in the unit/primary container (as applicable) regardless of dates of packing or shipping. On those items such as frozen fruits, juices and vegetables which are bulk frozen, the date of pack shall be the month and year the product is processed into its final form, regardless of subsequent packaging into primary (bulk/retail) containers. When dealing with natural cheeses, the date of pack shall be the date of manufacture.

5/ Delivery order numbers may be hand lettered. Hand lettering shall be legible and marked with non-fading durable ink.

6/ Contractor shall mark each lot by embossing, stamping, printing, stenciling, jet or laser printing each primary and/or shipping container, thus identifying one lot from all other lots produced by the same contractor.

3. SPECIAL MARKINGS

a. Fragile items. At least three surfaces (except the bottom surface) of each shipping container packed with delicate or fragile items shall be marked "FRAGILE" by means of stenciling or labeling. Shipping containers imprinted on at least three surfaces with "GLASS-DO NOT DROP OR THROW" or "GLASS-HANDLE WITH CARE" or similar precautionary markings shall not require "FRAGILE" markings.

b. Precautionary markings (see figure 2). For items required to be refrigerated or frozen, the following markings or equivalent wording, as applicable, shall be applied to the top or 2 sides of the container in letters 1 to 1-1/2 inches high (color of markings may be the same color as the color normally used by the contractor on his commercial shipping cases):

KEEP FROZEN or KEEP REFRIGERATED
(0.F. or BELOW) (Temperature range, as applicable)

c. Armed Forces symbol for Subsistence. 1/ Except for containers filled with fresh fruits and vegetables, all troop issue shipping containers shall have a solid crescent (figure 5) applied to the right and adjacent to the identification markings. The color of the crescent shall be in contrast to the applied surface. Subsistence items intended strictly for resale are not required to display the subsistence symbol.

d. Shipping container linear bar code markings. 1/ All shipping containers except for perishable items shall have bar code markings applied on the end of the container (see figure 1). When space does not permit placing all of the bar code markings on one surface of the shipping container, the bar code labels/markings will be placed on an adjacent side of the container. The bar code marking or label (representing the National Stock Number (NSN), contract number, and CAGE code) shall be in a vertical or "picket fence" configuration in an area adjacent to the identification markings. The bar code shall be placed a minimum distance of 1 inch from the top or bottom edges of the container and .5 inches from the side edge of the container. A minimum distance (quiet zone) of 0.25 inch from the nearest identification marking will be maintained. The bar codes shall be applied in either of the following format: (1) stacked on three separate lines (left hand start characters vertically aligned) or (2) applied in line with NSN preceding the contract number and CAGE code. A minimum space of 0.5 inch separating the bar codes shall be maintained. On fiberboard shipping containers, either bar code labels or direct printing are acceptable. When labels are used for other than ration items, the color of the labels may be white. If labels are used on ration items, the bars shall be black with a background earth tone color such as tan, beige, taupe or green.

1/ Not required on shipping containers of ration components being shipped from a contractor, or sub-contractor, to a ration assembly point.

E. MARKING INSTRUCTIONS FOR SHIPPING SACKS AND BAGS

1. IDENTIFICATION AND CONTRACT DATA MARKINGS (see Fig. 4).

   a. Beginning 7 inches from the top of the sack or bag, the following identification markings shall be applied in the order listed.

      Line 1 – National Stock Number (NSN) (e.g. 8920-00-165-6898)

      Line 2 – Item Description or Name (e.g. FLOUR, PASTRY)

      Line 3 – Net Weight or Quantity, Size and Unit, Date of Pack (e.g. 50 LB. NET PKG or 6/10 LB. PKG, DOP 3/03)
      Line 4 – Inspection/Test Date_____
      (e.g. INSPECTION/TEST 11/03_____)

   b. Beginning 12 inches from the bottom of the sack or bag, the following contract data markings shall be applied in the order listed.

      Line 1 – Contract or P.O. Number & Lot number

      (e.g. SP0300-03-C-4424, LOT 6)

      Line 2 – Contractor's name (e.g. TERMINAL FLOUR MILL CO.)

      Line 3 – Contractor's address w/ Zip Code)
      (e.g. PORTLAND, OR 97203)

   c. Alternatively, in lieu of the sequence shown above for identification and contract data markings, Net Weight/Date of Pack may be displayed with the contract data markings. When this option is utilized, Net Weight/Date of Pack will be the first line of contract data markings.
   d. Level A sacks and Level B (for ocean shipment) sacks. On the side of the shipping sack bearing the manufacturer's Certificate of Compliance, stencil or print the following words in block letters 1 to 1-1/2 inches high: "FOR OCEAN SHIPMENT". Marking shall be applied directly under the manufacturer's Certificate of Compliance markings.
   e. Commodities already packed in commercially printed sacks shall have the required markings stenciled in letters of 7/16 to 1 inch, equal height, centered on one face of the sack or bag.

2. When the printing area is too small to permit compliance with specified requirements, the spacing of the printing may be altered proportionately.

3. If the bag material (other than paper) is such that the information is not legible, when stenciled, the information shall be printed or typed on a white or manila cloth or paper tag. The required markings shall be waterproofed by coating the entire outer surfaces of the tag with spar varnish, clear acrylic coating compound or adhesive. The tags shall be attached with tag wire not smaller than 23-gauge (0.0258 in. diameter) or other suitable corrosion resistant metal fastener. Maximum size of tags shall be 28 square inches.

F. MARKING FOR PALLETIZED/CONTAINERIZED SHIPMENTS

1. MARKING AND SPECIAL MARKINGS

a. Markings and special markings as specified by Section D-3 (if applicable) for palletized/containerized unit loads shall be stenciled, printed, or labeled on two adjacent sides as follows:
Line 1 – NSN
Line 2 – Item Description or Name
Line 3 – Quantity, Size and Unit, 1/
Line 4 – Gross Weight and Cube 2/
Line 5 – Contract or P.O. number (Delivery Order Number (when applicable)) and Lot Number 3/ 4/
Line 6 – Name and Address of Contractor 3/
Line 7 – Date of Pack (DOP)
Line 8 – Inspection/Test Date 5/

1/ The quantity is the number of shipping cases in the unit load.

2/ Gross weight and cube; include the weight and dimensions of the pallet or load base.
3/ Contract markings (lines 5 and 6); required to be applied to one side surface of the unitized load.

4/ Different lot numbers will not be mixed on the same pallet load except for end of shift/partial lot quantities. The unit load markings shall reflect all involved lot numbers

5/ Inspection Test Date (ITD) is not required for shipment when the ration components are shipped to ration assembly points, except, Unitized Group Ration component item unit loads destined for government depot assembly points shall display ITD markings.

2. MARKINGS

a. Sheathed or Consolidation Boxes. The above-required marking may be applied directly on any two adjacent sides as shown in figure 3. Additionally, the Subsistence Crescent and bar code symbol must be applied in the approximate positions as shown in figure 3.

b. Unsheathed Loads. Unit load markings shall be placed on two adjacent sides of the unit load by means of marking panels 1/. Shipping cases will be placed or stacked so that the shipping case contract data markings are facing towards the outside of the load if possible. When required marking (see Section D) are exposed on two adjacent sides of the load, on one or more individual shipping container(s), the marking panel need only be marked with lines 3 and 4 as previously specified.

1/ Marking Panels

The marking panel shall be made from weather resistant fiberboard material complying with ASTM D 4727M. If the panel is secured to the load with tape, it must be weather resistant and no less than 2 inches wide. The tape shall be applied along each of the four edges of the panel; the ends of the tape shall not extend more than 3 inches past the adjacent panel ridge.

3. SHRINK FILM OR STRETCH-WRAP

a. For heat shrink or stretch-wrap bonded loads, the required unit load markings will be applied before the unit load is bonded with the film. When multi-layer applications of stretch wrap film obscure the identification and contract markings that were applied to the load prior to bonding, pressure sensitive labels shall be placed on the outermost layer of wrap. Alternatively, a placard may be appropriately positioned on the sides of the unit load just prior to applying the last layer of stretch wrap. The outside labels/placards shall be placed on either the identification sides of the load or on opposite sides.

NOTE: Outside labels/placards are in addition to labels/placards affixed directly to the unit load as cited above.

G. ADDRESS MARKINGS

1. DOCUMENTATION TO ACCOMPANY SEAVAN/MILVAN SHIPMENTS

Four copies of a document showing the contents of the van, and including the words "Date Stuffed" with such date, will be placed in a waterproof envelope marked "MILSTAMP DOCUMENTATION" and attached either to the interior of the loading door of the van or to one of the packages visible immediately upon opening. (This document may be any one of the following: contract, delivery order, packing/loading list, DD Form 250, TCMD, Bill of Lading or other document which fully identifies the contents.)

2. MILITARY SHIPPING LABELS (MSL)

a. Military (DoD) and contractor-or vendor-originated address markings, including the military shipment label (MSL) and respective bar code symbols, shall be as specified in DOD 4500.9-R, Part II, MIL-STD-129, and as summarized herein. The preferred location for applying address markings to shipping containers is shown in figures 1, 3, & 4. Exact placement of MSLs may vary slightly from those shown.

b. Military (DoD) and contractor- or vendor-originated address markings (see figure 6). Unless specifically exempted in the contract, (DoD) and contractor- or vendor shipping activities will apply address markings using a bar coded military shipping label (MSL). This includes shipments moving within CONUS or OCONUS, for CONUS to OCONUS, or conversely from OCONUS to CONUS.

Military Shipping Label (MSL) (see figure 6). The MSL will be completed and attached as specified herein (see figures 1, 3, & 4.

The MSL will include clear-text entries applicable to the shipment.

The MSL will include linear (Code 39) bar code symbols formatted in accordance with MIL-STD-129 in reference to ISO/IEC 16388. Three linear (Code 39) bar codes are required including the Transportation Control Number (TCN), Piece number without leading zeros, and Ultimate Consignee /Mark For DoDAAC.

The MSL will include a 2D(PDF417) symbol in accordance with ISO/IEC 15438, formatted in accordance with Table IV of MIL-STD-129 and as specified herein, with reference to DoD 4500.9-R, Part II, Appendix X. The 2D(PDF417) symbol will contain Table IV specified human readable information from the printed MSL, Table IV specified DoD 4500.9-R, Part II, TCMD data (only selected data), and Table IV specified line item supply data (DD Form 1348-1A or requisition information). The applicable 2D (PDF417) Transportation Control Movement Document (TCMD) data, and line item supply data in accordance with the following paragraphs. The applicable 2D(PDF417) symbol Data Identifier (DI) formats can be found in Table IV of MIL-STD-129. ISO/IEC 15434 and MHIA MH10.8.2 are the references for MIL-STD-129, Table IV.

The 2D(PDF417) symbol shall contain the clear-text information on the MSL as provided herein. For contractor or vendor shipments, the TCMD information, when required, shall be coordinated between the contractor or vendor and the contracting office or administrative contracting office, per the FAR 47.305-10 and the DFARS 247.305-10 and 247.371, and applied by the contractor per FAR 52.247-52. The TCMD may contain coded information that shall be converted to in-the-clear text for printing on the MSL, for example, deletion of leading zeros from pieces, weight, cube, length, width, height, TCMD data, and conversion of alpha numeric pieces, weight, cube, and TCMD codes to numeric digits. Each shipment unit in a consolidated shipment shall be marked with a 2D (PDF417) MSL.

The 2D (PDF417) symbol line item supply data for MILSTRIP transactions is sourced from DD Form 1348-1A information as noted in DOD 4000.25-1-M, Appendix 1.35, or as carried forward from the contract order. The MSL 2D (PDF417) symbol on each piece of a shipment unit will have the same line item information. For contractor or vendor shipments, this information, as available, and the DFARS 247.305-10 minimum requirements, shall be coordinated between the contractor or vendor and the contracting office or administrative contracting office. For non-MILSTRIP transactions, the available information will be limited. Factors that determine the amount of available data to be recorded on the 2D (PDF417) symbol are specified in this Section.

MSL size.

The recommended size for the MSL is 4 inches by 6 inches.

MSL stock quality. The quality of the MSL will be such that labels are suitable for ink printing without feathering or spreading. They must withstand normal handling and shipping conditions and remain securely in position. General bar code labels shall meet the following requirements:

Labels, paper, pressure-sensitive, water-resistant. Labels shall be of a water-resistant grade paper, film, fabric, or plastic, coated on one side with water-insoluble, permanent type adhesive. The adhesive shall adhere to metal, plastic, or fiberboard surfaces under high and low temperatures. Labels shall have a finish suitable for printing and writing on with ink without feathering or spreading, be capable of withstanding normal handling and storage conditions, and remain securely in position. Application specific performance criteria and durability requirements to ensure functionality in various climatic environments should be tailored, if required, using MIL-PRF-61002. MIL-PRF-61002 can be used as an acquisition tool when labels presently being used are not performing satisfactorily or when new conditions or applications require special label stock for those particular situations. Address marking bar code labels on exterior containers shall meet the following requirements:

Bar code labels on exterior shipping containers. When bar code labels are printed, the printer ribbons shall be of OCR-grade quality, or equivalent, and shall produce clear, smear-resistant markings. When bar code labels are used on exterior shipping containers, a waterproof, un tinted /transparent, plastic, protective laminate such as ASTM D 5486, type I, class 2 tape, or equivalent protection, shall be applied to or shall be inherent to the label.

MSL format. The in-the-clear data and bar code entries shall meet required standards and shall comply with the following paragraphs and MIL-STD-129, Table IV detailed format requirements. The in-the-clear data and linear (Code 39) bar code HRI shall be easily human readable. The linear (Code 39) bar codes and the 2D (PDF417) bar code symbol shall be easily machine-readable. A specific MSL format is not required except for the location of the TCN (see figure 6). The MSL format shall retain the applicable block titles associated with the data content. Figure 6 shows an example of an acceptable MSL format that may be used as a guideline in producing a label. MHIA MH10.8.1 is the referenced standard for developing a DTR compliant MSL.

Completing the MSL for address marking**.** The MSL shall be completed as follows to include in-the-clear text or descriptive information, linear (Code 39) bar codes with HRI, and a 2D(PDF417) symbol.

a. Linear (Code 39) bar code labels or 2D(PDF417) symbol labels with HRI may be affixed to the MSL as an alternative to direct printing on the MSL providing the labels do not impact the effectiveness of the MSL.
b. Data identifier (DI) codes shall not be used in conjunction with the linear (Code 39) bar codes.
c. The MSL unique transport unit identifier shall be the TCN and it shall be encoded and printed as the uppermost bar code on the top of the label. Information on TCN construction for the various types of shipments is detailed in DoD 4500.9-R, Part II, Cargo Movement, Appendix L.

d. Linear (Code 39) bar codes or 2D(PDF417) bar code symbols shall not be positioned in the same linear plane and the label layout should provide as much vertical spacing as available between the bar code symbols to reduce the possibility of scanning interference.
e. The text for all entries, except as noted below, shall be no smaller than 10 lines per 1 inch (approximately a 7 point font). The preferred font size is 10 to 14 points.

(1) The "Ship To" address character height shall be no smaller than the "From" address character height and should be distinctive in appearance, e.g., larger, bolder, different color, etc. The "Ship To" address shall be located below or to the right of the "From" address.
(2) The transportation priority numeral shall be bold text and shall be ¾ inch high (approximately a 72-point font).

Data content of the MSL (see figure 6). The data content of the MSL and the instructions for completion are summarized below.

(1) The MSL shall contain the following information: TCN. Enter the 17-character (alphanumeric) TCN using a ½-inch-high linear (Code 39) bar code with HRI as the uppermost bar code on the top of the label. For consolidated shipments, place a lead TCN in this block. The lead TCN shall not duplicate any internally packed TCNs.

(2) Transportation Account Code (TAC)/Postage. Enter the TAC or the postage data. For other than mail shipments, enter the TAC applicable to shipments moving from POE to POD, otherwise leave blank. For mail shipments, use one of the following:

(a) For metered mail, attach the stick-on metered postage values to or near this block.
(b) For permit imprint mail, enter the appropriate service/agency mail authorization.
Example: First Class Mail
Postage and Fees Paid
Defense Logistics Agency
Permit No. G-53

(3) From. Enter the Consignor DoDAAC/CAGE and in-the-clear address (up to 3 lines of 35 characters) of the shipping activity. For mail enter the zip code.

(4) Type Service. In-the-clear text (e.g., Frt.TL, Frt. LTL, SEAVAN) for the type of transportation service to the "Ship To" address. The in-the-clear text may be derived from the TCMD Mode/Method code for the Generic Cargo MSL.

(5) Ship to/POE. Enter the three-digit air/water Port of Embarkation (POE) code, if applicable, and an in-the-clear address (three characters and 5 lines of up to 35 characters).

(6)Priority. Enter the applicable transportation priority (TP). TP 1, 2, 3, or 4 (deferred air freight) should be clearly identified in the priority block of the MSL using bold text that is ¾ inch high.

(7) POD. Enter three-digit air/water Port of Debarkation (POD) port designator, if applicable. In-the-clear location name may be included. Blank for mail shipments

(8) Project Code. Enter project code, if applicable.

(9) Ultimate Consignee/Mark For Consignee. Enter the in-the-clear complete address(s) (up to 5 lines of 35 characters) and the ½-inch-high linear (Code 39) bar code DoDAAC with HRI.

(10) Weight. Enter actual gross weight (numeric value of this piece). Round to next whole digit and do not zero fill.

(11) RDD. Enter the Required Delivery Date (RDD) code specified by the requisitioner, if appropriate.

(12) CUBE. Enter the actual cube (numeric value of this piece). Round to next whole digit and do not zero fill.

(13) Charges. No known requirement. Leave Blank.

(14) Date Shipped. Enter an in-the-clear date (for example YDDD, YYYYDDD, DD/MM/YY, or DD-MMM-YYYY. Do not use the Date Shipped Code from DoD 4500.9-R, Part II, Appendix RR.

(15) FMS Case Number. Enter as FMS case identifier as appropriate.

(16) Piece Number. Enter the piece number (numeric value assigned to this piece) of the cargo documented by the TCN for this shipment unit and a ½ inch high linear (Code 39) bar code. Do not zero fill. Piece Number may be expressed as "Piece Number of Total Pieces" to save space on the label, only the Piece Number has a linear (Code 39) bar code; the word "of" and the total number of pieces are not shown in the linear (Code39) bar code.

(17) Total Pieces. Total number (numeric value) of pieces documented by the TCN for this shipment unit. Total Pieces may be expressed as "Piece Number of Total Pieces" to save space on the label, the Total Pieces value is not shown in the Piece Number linear (Code 39) bar code. Do not zero fill.

18) 2D(PDF417) symbols. Includes MSL in-the-clear text data, selected TCMD data, and selected supply/unit information.

MSL 2D(PDF417) symbol coding requirements. Each MSL 2D (PDF417) symbol shall contain the data elements from the applicable figure in Table IV of MIL-STD-129 for encoding MSL text, TCMD data, and supply line item information.

a. The data elements include MSL information, header TCMD data (T_0 through T_3) and the respective trailer data (T_5 through T_9) for the labeled shipment unit, and the line item contents of the single shipment unit for generic cargo. Table IV-A of MIL-STD-129 provides data descriptions, format, and data sources for the MHIA MH 10.8.2 DIs used in the 2D(PDF417) symbol and for the data element identifiers (DEI) that identify DoD unique data elements from DoD 4500.9-R and DoD 4000.25-1-M. Tables IV-B and Table IV-C provide the content of the data streams for sustainment cargo MSLs.

b. All shipment unit data and line item data in the MSL 2D(PDF417) symbol replicates data from the three sources noted below. If the data is available and a corresponding DI or DEI is shown in the applicable Table IV-B or IV-C, the data must be entered into the 2D(PDF417) symbol. Blank data fields are not to be encoded. When multiple sources for a data element are identified, the sources are prioritized as follows (TCMD) source has priority if it exists):

(1) Source 1: Header TCMD data. Format 07 DEI 34 (Table IV-A of MIL-STD-129) shall be used to identify the Document Identifier Code of header TCMD data being documented in the 2D (PDF417) symbol.
(2) Source 2: Supply documentation (DD Form 1348-1A bar code data) or contract data for each supply line item packaged within the shipment unit.
(3) Source 3: Shipment information entered in the clear on the MSL.

c. The MSL 2D (PDF417) symbol can only contain limited amounts of data (about 1000 characters) The following factors will be considered when determining the amount of available data to record in the 2D(PDF417) symbol.

(1) A consolidated shipment unit containing multiple shipment units shall be documented by encoded only the header TCMD data and its respective trailer TCMD information. The MSL 2D symbol shall not be populated with TCMD information from the internal shipment units. Each shipment unit in a unitized shipment must be marked with a 2D (PDF417) MSL. The MSL 2D (PDF417) symbol does not contain enough capability to consistently record the internal shipment unit prime TCMD data (T_4) and the respective trailer data.

(2) The 2D (PDF417) symbol for a consolidated shipment unit of multiple shipment units, or a mix of line items and multiple shipment units, shall not contain any line item information and shall be marked with an in-the-clear text message that shall be entered at the bottom of the 2D (PDF417) symbol stating “NO LINE ITEM DATA” and it shall be

entered into the Format 07 DEI 35 (free text comment) area of the MSL 2D (PDF417) symbol for reprinting purposes

(3) It may not be possible to document the supply line items of an entire multi pack of consolidated shipment. If the AIT media can't store all of the line item data required to document the shipment unit, the line item information shall be eliminated from the 2D (PDF417) symbol. An in-the-clear message shall be entered at the bottom of the 2D (PDF417) symbol stating "NO LINE ITEM DATA" and it shall be entered into the Format 07 DEI 35 (free text comment) area of the MSL 2D (PDF417) symbol for reprinting purposes.

(4) In order to provide space for multiple line item supply data in the 2D (PDF417) symbol of the Generic Cargo MSL, the in-the-clear address data shall only be printed in the 2D (PDF417) symbol of a Generic Cargo MSL for single line item shipments or when no line item data is printed in the bar code. Most multi-piece shipments derive from a single line item document; therefore, the addressing data will usually be available in the 2D (PDF417) symbol for reprinting MSLs when a Tran shipper needs to split a multi-piece shipment.

d. When an MSL 2D(PDF417) symbol is generated in accordance with Table IV-B of MIL-STD-129 (Generic Cargo), it does not need to include DIs that are blank. Metric units of measure may be used in the 2D(PDF417) symbol for selected DIs /DEIs as noted in Table IV-A.

MSL bar code symbol printing standards. The three linear bar codes and 2D(PDF417) symbol shall be printed in accordance with this standard with reference to ANSI MH10.8.1, ISO/IEC 16388, and ISO/IEC 15438 for further explanation. ISO/IEC 15416 defines print quality for linear bar codes. ISO/IEC 15415 defines print quality for two-dimensional symbols. Printed symbols will conform to "B" quality standards as defined in the appropriate standard. The requirements are summarized as follows:

1. Linear (Code 39) bar codes.

(1) The minimum bar height shall be ½ inch.

(2) The minimum narrow element dimension (X-dimension) shall not be less than 0.01 inch.

(3) The wide to narrow ratio of the elements should be 3:1. The measure ratio shall be between 2.4.1 and 3.2.1.

(4) The leading and trailing quiet zones shall be not less than 0.25 inches.

(5) The linear bar codes should be presented on shipment units with the bar codes horizontal (picket fence orientation).

(6) The label should be designed so that two bar codes and/or symbols are not in the same linear plane unless the label is wide enough to reduce the possibility of interference with successful bar code and/or symbol scanning.

(7) The quality of the printed bar code shall meet a grade requirement of 2.5(B) at the point of production when measured in accordance with ISO/IEC 15416 with a measurement aperture of 0.25 mm and an inspection wavelength of 660 +/- 10nm.

2. 2D(PDF417) symbol. For technical details, see Table IV of MIL-STD-129.

Human readable interpretation (HRI). The HRI of the TCN, piece number, and consignee DoDAAC should appear above, below, or in line with the linear bar code. When in line, a 0.25-inch quiet zone shall be provided.

H. PLACEMENT OF ADDRESS MARKINGS (MSL)

Address labels should be affixed at a suitable location where there is minimum risk of damage. For approximate placement of the address markings see figures 1, 3, or 4.

Required address markings shall be placed on the identification-marked side of exterior shipping containers. If a container is too small to accommodate the address on the identification-marked side, the address markings/label shall be applied on an adjacent or opposite side of the shipping container, or attached to a paper shipping tag or a marking board/panel. When the surface of the shipping container does not lend itself to direct application of the MSL, or the MSL obscures other required markings on a shipping container, the label shall be attached to a paper shipping tag, a marking board or marking panel. The tag shall be large enough to accommodate the label without folding. Separate marking boards or panels shall be used for identification and address markings. Separate tags shall be used for identification and address markings.

Stencil marking alone is not an appropriate alternative for applying address marking to shipments because stenciling cannot accommodate the bar code requirements.

a. **Paper shipping sacks, bags, and textile/laminated textile bags**.

When a label is used, it shall be applied below the identification markings and the side of the sack or bag that does not bear the certificate of compliance of the sack or bag manufacturer. Commercially packed commodities shall have the required label centered on one face of the sack or bag. When the printing area is too small, spacing of the printing may be altered proportionately and lines may be consolidated to accommodate the MSL label.

b. **Unit load (see figure 3)**. When a palletized unit load is formed, the individual containers comprising the unit load shall already be marked with the appropriate identification information. The palletized unit load shall have the exterior container identification and address markings applied as specified herein and as shown in Figure 3. When a fiberboard container such as a triple-wall fiberboard box is used for unitizing a load in lieu of palletization, all required markings, including the

address label, may be placed directly on the flat fiberboard surface. The gross weight for palletized/containerized unit loads shall include the weight of the pallet or container base. Because palletized loads are often stacked two or three high when shipped or stored, the markings shall be large enough to be read from a distance. The size of the lettering shall be proportionate to the overall size of the unitized load but shall be not less than three-fourths of an inch in height.
Address markings shall be placed on a marking board/panel by using a label. When a palletized load is covered with stretch-wrap film, pressure-sensitive labels containing the address markings may be placed on the outermost layer of wrap on either side of the load in addition to other marking requirements. Variations are authorized based on local operations and capabilities (e.g., a marking board/panel positioned on the pallet before the last layer of wrap is applied).

e. **Commercial- or Government-owned (or -leased) shipping containers (SEAVANs) and military-owned demountable containers (MILVANs)**

Exterior container identification markings shall not be placed on the outside of a SEAVAN/MILVAN. A completed MSL shall be attached to the seal on the SEAVAN/MILVAN or shall be attached at the rear of each SEAVAN/MILVAN. **Shipping containers, consolidation containers, and palletized unit loads, do not require individual address/bar code markings if they have not been assigned an individual TCN and if they are consolidated by the shipper of origin into a full SEAVAN/ MILVAN load for delivery as a single shipment unit to the ultimate consignee.** As per DTR direction, all individual shipment units documented with a TCN, including those inside a consolidation container, must be marked with an MSL to facilitate DTS movement, in-transit visibility, and in-check/receipt processing. CCP activities that receive shipments for consolidation are not required to obliterate address labels applied by the shipper of origin or to relable the consolidated shipment units.

f. **Full carload and full truckload shipments.** Full carload and full truckload shipments moving as a single shipment unit from a single consignor to a single consignee require at least one completed MSL attached to the container or palletized load located closest to the door. Additional MSLs may be placed on other containers or palletized unit loads in the shipment.

g. **Less than carload and less than truckload (LTL) shipments**. A MSL is required on all loose shipping containers, or if palletized, unit loads, for less than carload and LTL lots. Exterior container markings are not required on the train car or truck.

Direct vendor delivery (DVD).

Contractor- or vendor-originated DVD shipments require identification marking and address marking with bar codes. **DVD shipment documentation must also be marked with additional bar codes.** This additional issue/receipt bar code

requirement is applicable only to the shipment of materiel to a location other than a DLA distribution depot. All shipments to DLA distribution depots (stock buy) still require marking in accordance with this document. The issue/receipt bar code markings shall either be placed on or printed on labels affixed to either the DD Form 250/250c or the commercial packing list. If placed on the DD Form 250/250c, they should be in blocks 15, 16, 17, etc. In either case, these documents shall be furnished in a packing list envelope affixed to the outside of the shipping container. The following separate lines of issue/receipt bar code data with HRI printed directly below the linear (Code 39) bar code in accordance with ISO/IEC 16388, shall be provided as three bar codes containing data as described in DoD 4500.25-1-M, Appendix 2:

a. Bar code: Document number and suffix (if applicable) for a maximum fourteen characters. It may be referred to in a contract/order as the requisition number.

b. Bar code: Thirteen digit National Stock Number (NSN) and two additional (Add) codes as applicable. In the absence of the NSN and Add code, the CAGE Number will be used for a maximum of 15 characters.

c. Bar code: Three character inventory control point identifier code (RIC), two character unit of issue (UI), five digit zero filled quantity (QTY), one character condition code (COND), blank or last two characters of the distribution code (DIST), and a seven digit zero filled Unit Price (UP) showing dollars and cents with no decimal. The bar code will have a fixed length of 20 characters to include leading zeros and blanks.

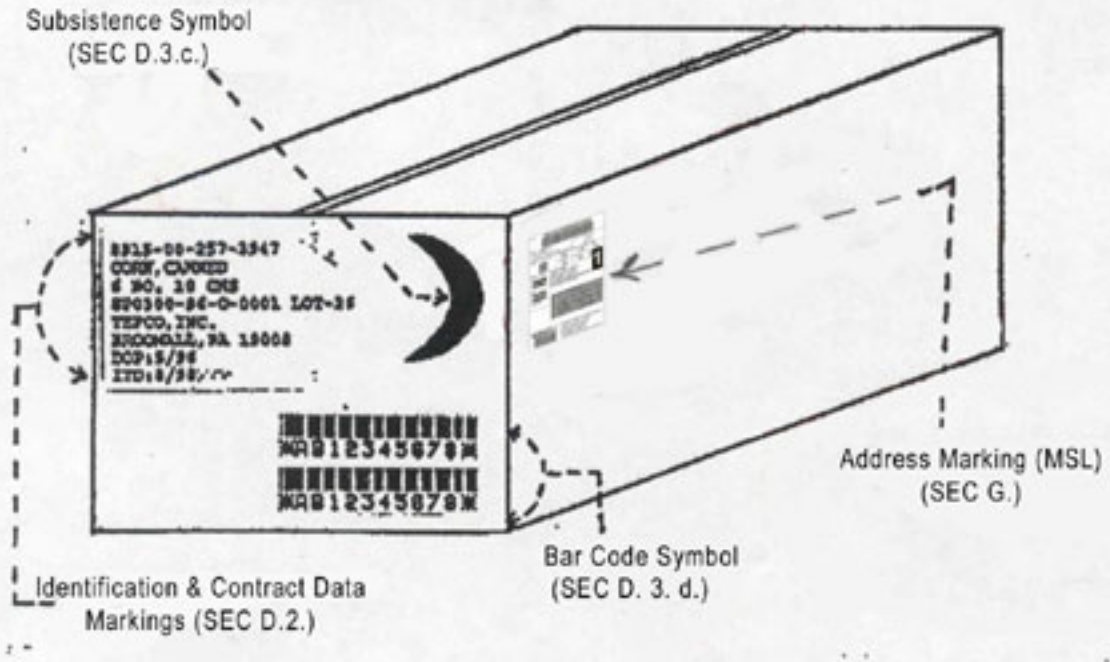


FIGURE 1. BASIC MARKINGS FOR SHIPPING CASES (SEMIPERISHABLE)

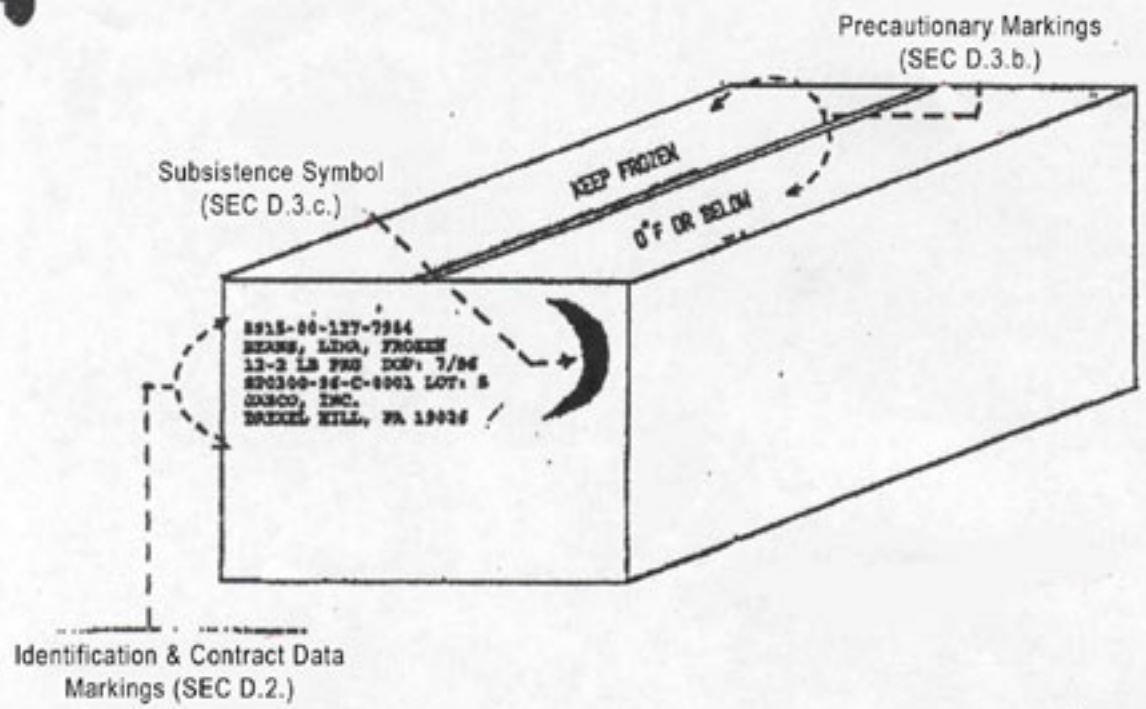


FIGURE 2. BASIC MARKINGS FOR SHIPPING CASES (PERISHABLES)

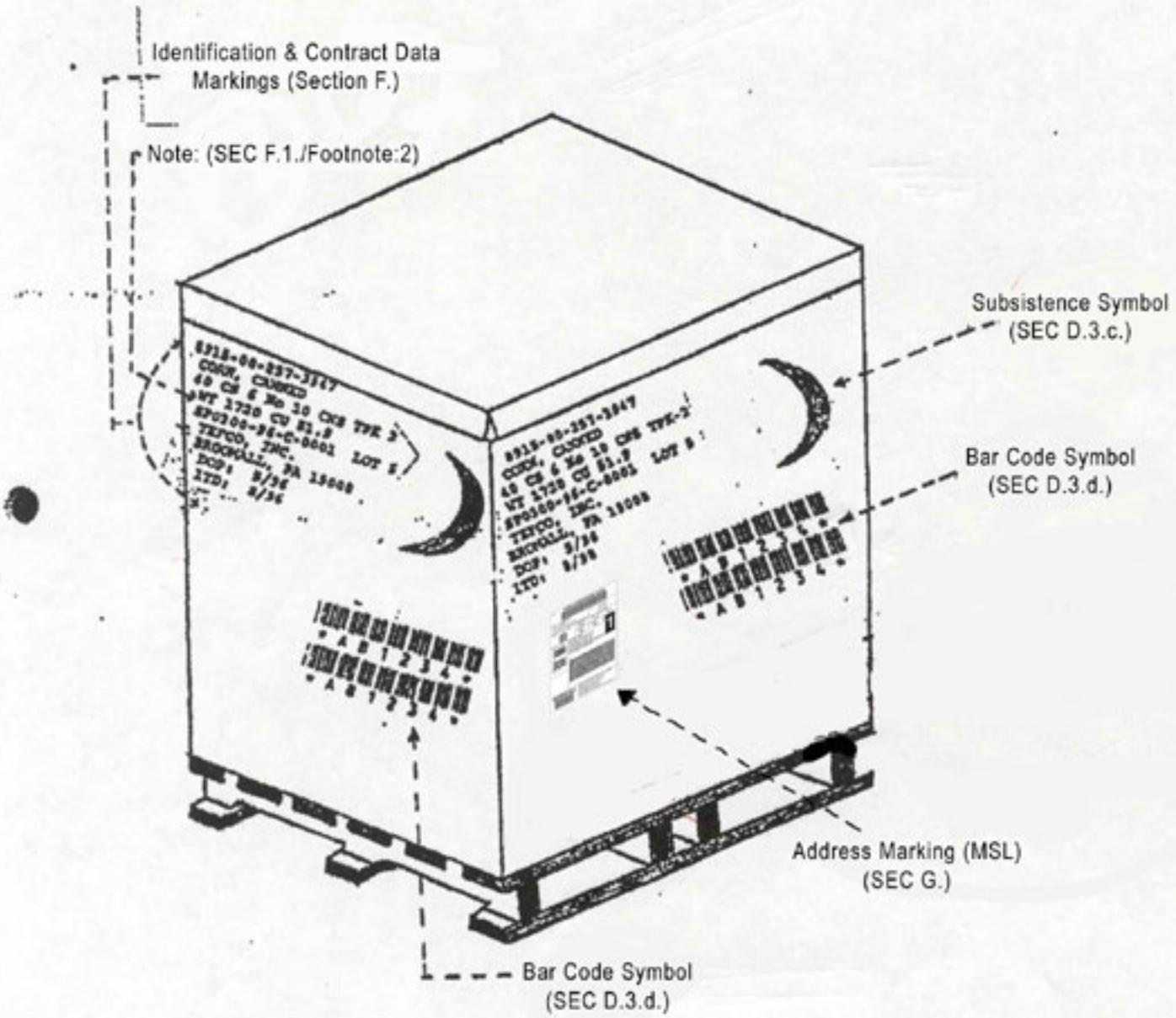


FIGURE 3. IDENTIFICATION, CONTRACT DATA, SPECIAL MARKINGS AND ADDRESS MARKINGS (SHEATHED LOADS OR CONTAINERIZED LOADS)

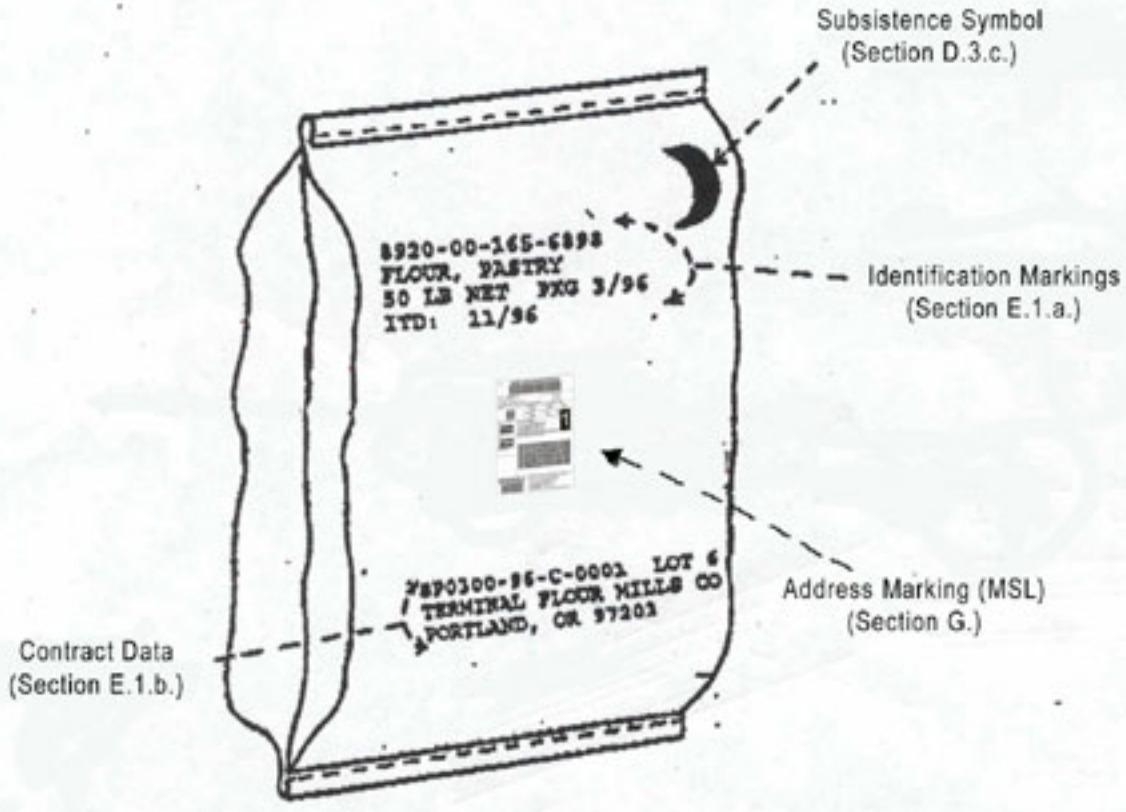
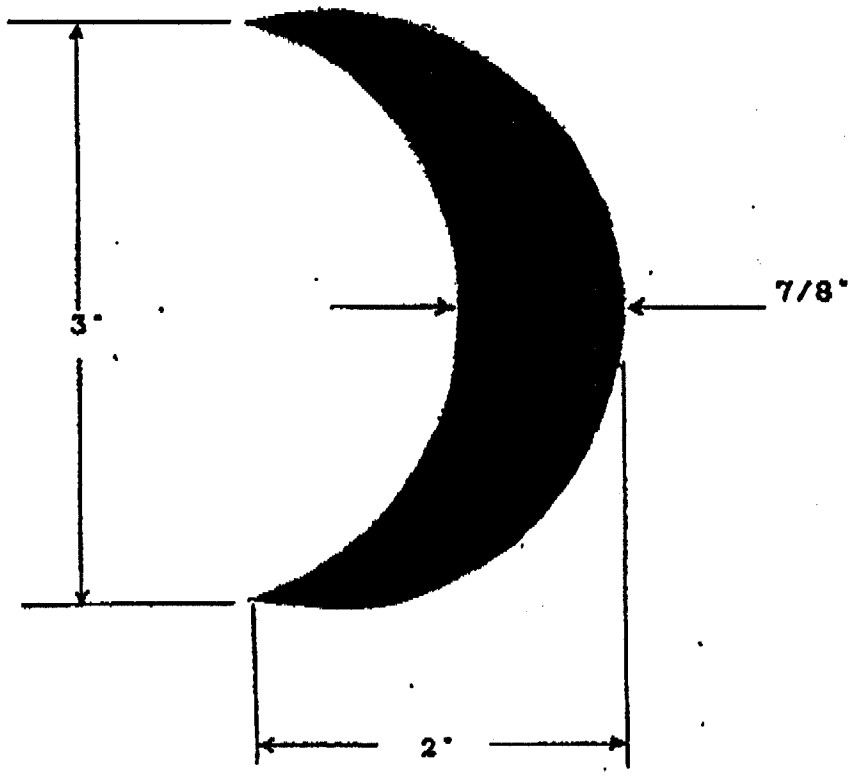


FIGURE 4. IDENTIFICATION, CONTRACT DATA AND ADDRESS MARKINGS FOR SHIPPING SACKS AND BAGS

ARMED FORCES SYMBOL FOR SUBSISTENCE



Note: Dimensions shall be as indicated above +/- 1/4 inch.

Figure 5

Generic Cargo Label

Figure 6

Military Shipping Label (MSL)