

INCH-POUND

MIL-STD-129-2
15 JUNE 1993

MILITARY STANDARD
MARKING FOR SHIPMENT AND STORAGE -
MEDICAL MATERIAL
(PART 3 OF 4 PARTS)



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MIL-STD-129-2

FOREWORD

1. This military standard is approved for use by all Departments and Agencies of the Department of Defense (DOD).

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Chief, Logistics Support Activity Packaging, Storage, and Containerization Center, ATTN: AMXLS-TP-P, 11 Midway Road, Tobyhanna, PA 18466-5097, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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1. SCOPE

1.1 Purpose. This standard provides the minimum requirements for the uniform marking of medical material for shipment and storage. It accommodates the requirements for movement processing as specified in DOD 4000.25-1-M, Military Standard Requisitioning and Issue Procedures (MILSTRIP); DOD 4000.25-2-M, Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP); and DOD 4500.32-R, Military Standard Transportation and Movement Procedures (MILSTAMP).

1.2 Applicability. Unless otherwise specified in the acquisition document, the marking and labeling of medical material for shipment and storage shall be accomplished, applied, and positioned on all containers as specified herein. For other than ammunition, subsistence, and medical material, the marking of all general supply commodities shall be as specified in the latest revision of MIL-STD-129, Marking for Shipment and Storage. As defined in ASTM D996, Standard Terminology of Packaging and Distribution Environments, marking is "the application of numbers, letters, labels, tags, symbols, or colors to provide identification and to expedite handling during shipment and storage."

1.2.1 Exceptions, exemptions, and additions. The marking requirements specified herein are not all inclusive. All marking exceptions, exemptions, or additions to the requirements in this standard must be specified in the acquisition document.

1.3 English-metric conversion. In order to accommodate the requirements of DOD Directive 4120.18, Metric System of Measurement, two tables describing English-metric conversion applicable to this standard are provided. For convenience in calculation, metric equivalents are expressed to two decimal places (nearest hundredth), wherever practical.

TABLE I. Standard English-metric equivalents

Volume:

1 fluid ounce	= 29.57 milliliters	1 quart	= 0.95 liter
1 pint	= 0.47 liter	1 gallon	= 3.79 liters

Weight:

1 ounce (avoirdupois)	= 28.35 grams
1 pound (avoirdupois)	= 453.59 grams or 0.454 kilogram

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TABLE I. Standard English-metric equivalents - Continued.Length:

1 inch	=	2.54 centimeters
1 foot	=	30.48 centimeters or 0.305 meter
39.37 inches	=	1 meter (3.28 feet = 1 meter)

TABLE II. MIL-STD-129-2 English-metric conversionsVolume (Liquids):Weight:

<u>Gallons</u>	=	<u>Liters</u>	<u>Ounces</u>	=	<u>Grams</u>
1		3.79	1		28.35
5		18.95	10		283.50
50		189.50			
55		208.45			(1000 grams = 1 kilogram)

Volume (Solids):

<u>Cubic feet</u>	=	<u>Cubic meter</u>	<u>Cubic feet</u>	=	<u>Cubic meters</u>
1.0		0.030	6.0		0.18
1.2		0.036	6.5		0.195
1.3		0.039	8.4		0.25
2.0		0.060	9.0		0.27
2.5		0.075	10.0		0.30
3.0		0.090	12.0		0.36
4.1		0.123	30.0		0.90
4.7		0.141	60.0		1.80
5.3		0.160	66.5		1.995

Pounds = KilogramsPounds = Kilograms

1.	0.45
2.2	1.0
10.	4.54
11.	4.99
50.	22.7
52.	23.61
65.	29.51
75.	34.05

100	45.4
125	56.75
144	65.37
150	68.10
200	90.80
500	227.0
1000	454.0
1700	771.8

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TABLE II. MIL-STD-129-2 English-metric conversions - Continued.

<u>Inches</u>	=	<u>Centimeters</u>	<u>Inches</u>	=	<u>Centimeters</u>
0.0258		0.07	0.50		1.27
0.03		0.08	0.875 (7/8)		2.22
0.0625		0.16	0.90		2.29
0.095 (3/32)		0.24	1.0		2.56
0.10		0.25	1.5		3.81
0.125 (1/8)		0.32	2.0		5.08
0.188 (3/16)		0.48	2.5		6.35
0.375 (3/8)		0.95	3.0		7.62
4.0		10.16	50		127.0
5.0		12.70	100		254.0
10.0		25.40	144		365.76

NOTE: 10 millimeters equals 1 centimeter.

<u>Feet</u>	=	<u>Meters</u>
1		0.305
3.28		1.0
25		7.62
50		15.24
150		45.73

Temperature conversion:

To change degrees Celsius (C) to degrees Fahrenheit (F), multiply temperature by 1.8 and add 32 degrees F.

To change degrees Fahrenheit (F) to degrees Celsius (C), subtract 32 from the temperature and divide by 1.8.

Degrees Fahrenheit = Degrees Celsius

0	-18
32	0
35	2
46	8
100	38
212	100

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

FEDERAL

- | | |
|-----------|---|
| A-A-900 | - Tag, Shipping (Paper) |
| A-A-1907 | - Protector, Packing List |
| UU-T-81 | - Tag, Shipping and Stock |
| PPP-E-540 | - Envelope, Water Resistant, for Packing Lists and Shipping Documents |
| PPP-T-60 | - Tape, Packaging, Waterproof |
| PPP-T-76 | - Tape, Pressure-sensitive Adhesive, Packaging/Paper (for Carton Sealing) |

MILITARY

- | | |
|-------------|---|
| MIL-P-116 | - Preservation, Methods of |
| MIL-L-61002 | - Labels, Pressure-sensitive Adhesive, for Bar Codes and Other Markings |

STANDARDS

FEDERAL

NONE

MILITARY

- | | |
|---------------|---|
| MIL-STD-129 | - Marking for Shipment and Storage |
| MIL-STD-129-1 | - Marking for Shipment and Storage - Ammunition and Explosives |
| MIL-STD-129-3 | - Marking for Shipment and Storage - Semi-perishable and Perishable Subsistence |
| MIL-STD-130 | - Identification Marking of U.S. Military Property |
| MIL-STD-1189 | - Bar Code Symbology |

(Unless otherwise indicated, copies of Federal and Military specifications and standards are available by mail from the DODSSP - Customer Service, Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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2.1.2 Other Government documents and publications. The following other Government documents and publications form a part of this document to the extent specified herein. Unless otherwise specified, issues are those cited in the solicitation.

CODE OF FEDERAL Regulations (CFR)

Title 29 CFR - Labor
 Title 40 CFR - Protection of Environment
 Title 49 CFR - Transportation

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

JOINT MILITARY

AFMC 800-29/AMC-R 700-103/ - Policies and Procedures for
 NAVSUPINST 4030.50/MCO Hazardous Materials Package
 4030.39/DLAR 4145.37 Certification
 AFR 71-4/TM 38-250/NAVSUP - Packaging and Materials Handling
 PUB 505/MCO P4030.19/ - Preparing Hazardous Materials
 DLAM 4145.3 for Military Air Shipments
 DLAR 4145.41/AR 700-143/ - Performance Oriented Packaging
 AFR 71-5/NAVSUPINST of Hazardous Materials
 4030.55/MCO 4030.40
 DOD 4000.25-1-M - MILSTRIP
 DOD 4000.25-2-M - MILSTRAP
 DOD 4000.25-6-M - DOD Activity Address Directory
 DOD 4140.27-M - Shelf-life Item Management
 Manual
 DOD 4500.32-R - MILSTAMP
 DOD 6050.5H - DOD Hazardous Chemical Warning
 Labeling System
 Cataloging Handbook H4/H8 - Commercial and Government Entity

(DOD activities should request copies of Cataloging Handbook H4/H8 from the Commander, Defense Logistics Services Center, Battle Creek, MI 49017-3084. All other joint military publications that are listed above should be requisitioned through the applicable Service/Agency publications distribution office. Non-DOD activities should obtain copies of the publications from the Defense Logistics Agency, ATTN: DLA-XPD, Cameron Station, Alexandria, VA 22304-6100, Commercial Phone: (703) 274-6011.)

NORTH ATLANTIC TREATY ORGANIZATION (NATO)

STANAG 2060 - Identification of Medical Material for
 Field Medical Installation

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(Copies of Standardization Agreements (STANAGs) are available by mail from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

UNITED STATES POSTAL SERVICE (USPS)

USPS Publication #52 - Acceptance of Hazardous, Restricted, or Perishable Matter

(Application for copies should be addressed to the Materiel Distribution Center, Route 206, VA Supply Depot, Somerville, NJ 08877-0001. A check for \$1.00 payable to the U.S. Postal Service must accompany each application.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation.

ASTM

ASTM D996 - Standard Terminology of Packaging and Distribution Environments

(Application for copies should be addressed to ASTM, 1916 Race Street, Philadelphia, PA 19103.)

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

Dangerous Goods Regulations

(Application for copies should be addressed to International Air Transport Association, 2000 Peel Street, Montreal, Quebec, Canada H3A 2R4.)

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

Technical Instructions for the Safe Transportation of Dangerous Goods by Air

(Application for copies should be addressed to International Regulations Publishing and Distributing Organization, P.O. Box 60105, Chicago, IL 60660.)

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INTERNATIONAL MARITIME ORGANIZATION (IMO)

International Maritime Dangerous Goods Code

(Application for copies should be addressed to International Maritime Organization, 4 Albert Embankment, London SE1 7SR, England.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3. DEFINITIONS

General packaging definitions may be found in ASTM D996 and other referenced documents. Hazardous materials definitions are listed in Title 49 CFR, part 172, and in other related publications. For purposes of this standard, the following definitions shall apply.

3.1 Abbreviations and acronyms. The abbreviations and acronyms used in this standard are defined as follows:

APL	- Automated Packing List
APO	- Air Post Office
ASTM	- American Society for Testing and Materials
BT	- Bottle
BX	- Box
CAA	- Competent Authority Approval
CAGE	- Commercial and Government Entity
CFR	- Code of Federal Regulations
CLIN	- Contract Line Item Number
COC	- Certificate of Conformance
COE	- Certification of Equivalency
CON CODE	- Supply Condition Code
CONTR	- Contract Data Markings
CONUS	- Continental United States
CPI	- Characters Per Inch
CU	- Cube
DEPMEDS	- Deployable Medical System
DIST	- Distribution Code
DLA	- Defense Logistics Agency
DOD	- Department of Defense
DODAAC	- Department of Defense Activity Address Code
DODISS	- Department of Defense Index of Specifications and Standards
DOT	- Department of Transportation
DPSC	- Defense Personnel Support Center
DTS	- Defense Transportation System
EA	- Each
EXP	- Expiration
FMS	- Foreign Military Sales
FPO	- Fleet Post Office
FSC	- Federal Supply Class
GSA	- General Services Administration
HAZMAT	- Hazardous Materials
HRI	- Human-readable Interpretation
IATA	- International Air Transport Association
ICAO	- International Civil Aviation Organization
IDENT	- Identification Markings
IMDG	- International Maritime Dangerous Goods
IMO	- International Maritime Organization

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INSP	-	Inspection
kPa	-	Kilopascal
MCP	-	Materiel Consolidation Point
MFD	-	Manufactured
MILSTAMP	-	Military Standard Transportation and Movement Procedures
MILSTRAP	-	Military Standard Transportation Reporting and Accounting Procedures
MILSTRIP	-	Military Standard Requisitioning and Issue Procedures
MILVAN	-	Military-owned Demountable Container
MTMC	-	Military Traffic Management Command
NA	-	North American
NATO	-	North Atlantic Treaty Organization
NDC	-	National Drug Code
NIIN	-	National Item Identification Number
NMCS	-	Not Mission Capable Supply
NSN	-	National/NATO Stock Number
OCONUS	-	Outside Continental United States
OCR	-	Optical Character Reader
OF	-	Optional Form
OSHA	-	Occupational Safety and Health Administration
PIIN	-	Procurement Instrument Identification Number
PN	-	Product/Part Number
POD	-	Port of Debarkation
POE	-	Port of Embarkation
POP	-	Performance-oriented Packaging
PSN	-	Proper Shipping Name
QTY	-	Quantity
QUP	-	Quantity Per Unit Pack
RDD	-	Required Delivery Date
RIC	-	Routing Indicator Code
RO	-	Roll
ROD	-	Report of Discrepancy
SEAVAN	-	Commercial- or Government-owned (or -leased) Shipping Container
SER NO	-	Serial Number
SF	-	Standard Form
SKO	-	Set, Kit, and Outfit
SLC	-	Shelf-life Code
STANAG	-	Standardization Agreement
TCN	-	Transportation Control Number
TP	-	Transportation Priority
UI	-	Unit of Issue
UN	-	United Nations
UP	-	Unit Price
UPC	-	Universal Product Code
USPS	-	United States Postal Service
WT	-	Weight

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3.2 Bar code. An array of rectangular bars and spaces in a predetermined pattern representing coded elements of data that can be read and interpreted by automatic bar code reading devices.

3.3 Cognizant activity. The activity having responsibility for or jurisdiction over a contract. At a contractor's facility, the cognizant activity is the administrative contracting officer or the procuring contracting officer. Contractor personnel do not qualify as a cognizant activity. At DOD installations, the cognizant activity is the head of the agency, bureau, command, or service responsible for storage and shipment.

3.4 Commercial and Government Entity (CAGE) code. A five-position alpha-numeric code applicable to all activities which have produced or are producing items used by the Federal Government and to Government activities which control design or are responsible for development of certain specifications, drawings, or standards which control the design of items. CAGE codes are listed in the CAGE Cataloging Handbook H4/H8.

3.5 Consignee (receiver). Party to whom materiel is shipped and whose name and address appear in the "ULTIMATE CONSIGNEE OR MARK FOR" block of the shipping label.

3.6 Consignor (shipper). Party who ships materiel and whose name and address appear in the "FROM" block of the shipping label.

3.7 Consolidation container. A container used to consolidate more than one line item into a single shipping container to be shipped to one destination, but not necessarily to one addressee.

3.8 Contract line item number (CLIN). A 4-6 digit number used to identify each delivery date and/or destination's quantity in the contract schedule.

3.9 Contract or purchase order number (including four-digit delivery order number or call number, when specified). The acquisition instrument identification number appearing on the acquisition document. Some DOD contracts refer to the contract or purchase order number, together with the delivery order number, as the procurement instrument identification number (PIIN).

3.10 Cytotoxic (antineoplastic) drug. A drug that is highly toxic, mutagenic, teratogenic, and carcinogenic, used for cancer chemotherapy.

3.11 Date assembled. The date items or parts are assembled into components, sets, kits, or assemblies, or the date that components, sets, kits, or assemblies are assembled into a unit.

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3.12 Date packed. The date on which the product (item) was packed in the unit pack, regardless of the date of exterior packing, additional processing, or shipping.

3.13 Defense Transportation System (DTS). The DTS consists of military-controlled or -operated terminal facilities, Air Mobility Command controlled or arranged airlift, Military Sealift Command controlled or arranged sealift, and Government-controlled air or land transportation.

3.14 Deployable medical system (DEPMEDS). A DEPMEDS is a hospital equipment system that is capable of being located in a desired or required area of operation during a contingency, war, or national emergency. The system includes all medical supplies and equipment and selected nonmedical equipment such as electrical generators, environmental control equipment, dolly sets, rigid and fabric shelters, and power distribution systems.

3.15 Exterior (shipping) container. A container, bundle, or assembly that is sufficient by reason of material, design, and construction to protect unit packs and intermediate containers and their contents during shipment and storage. It can be a unit pack or a container with a combination of unit packs or intermediate containers. It may or may not be used as a shipping container.

3.16 Hazardous material (HAZMAT). A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated in Title 49 CFR and in other hazardous materials publications.

3.17 Human-readable interpretation (HRI). Exact interpretation of the encoded bar code date presented in a human-readable font.

3.18 Interior container. A container that is inside another container. It may be a unit pack or an intermediate container that is placed inside an exterior container or shipping container. It is not to be used as a shipping container.

3.19 Intermediate container. A wrap, bundle, or box containing two or more unit packs of identical items.

3.20 Item description (nomenclature). The name and description of an item as it appears in the contract, purchase order, or the requisition. The source document for this information is the DD Form 61 (Request for Nomenclature), which contains the exact name and description of an item. Abbreviated descriptions that are authorized by the cognizant activity are permitted.

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3.21 Kit. A packed unit or group of items normally used in modification, installation, or survival.

3.22 Levels of protection. The extent of preservation and packing required to prevent deterioration or damage to supplies and equipment due to hazards to which they may be exposed during shipment and storage.

3.23 Lot (control) number. A series of numbers or letters, or both, established to record production and control of the product.

3.24 Military levels of preservation. Preservation methods and procedures defined in MIL-P-116.

3.25 National/NATO stock number (NSN). It is a 13-digit number divided into two parts, the Federal supply class (FSC) number and the national item identification number (NIIN). The FSC is the first four digits of the NSN and establishes its relationship to other items within the same FSC. The NIIN is the last nine digits of the NSN. The first two digits identify the country assigning the number and the remaining seven are a serially assigned number.

3.26 Packaging. The processes and procedures used to protect materiel from deterioration, damage, or both. It includes cleaning, drying, preserving, packing, marking, and unitizing.

3.27 Packing. The assembling of items into unit packs and intermediate or exterior containers, with the necessary blocking, bracing, cushioning, weatherproofing, reinforcement, and marking.

3.28 Palletized unit load. A quantity of items, packed or unpacked, which is arranged on a pallet in a specified manner and is secured, strapped, or fastened on the pallet so that the whole palletized load is handled as a single unit.

3.29 Performance-oriented packaging (POP). Type of packaging based on the ability of packaging to perform to a specific level of integrity when subjected to performance tests.

3.30 Perishable item. An item which normally requires some type of environmental control, which may include freezing the item, during transportation and storage.

3.31 Port of debarkation (POD). Authorized point of entry into a foreign country or the continental United States (CONUS).

3.32 Port of embarkation (POE). Authorized point of departure from a foreign country or from CONUS.

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3.33 Preservation. The application of protective measures, including cleaning, drying, preservative materials, barrier materials, cushioning, and containers, when necessary.

3.34 Project code. A three-position, alpha-numeric code which identifies plans, programs, and exercises.

3.35 Proper shipping name (PSN). The name of a hazardous material shown in Roman print (not italics) in part 172 of Title 49 CFR and in other hazardous materials related publications.

3.36 Protected cargo. Items required to be secured, accounted for, identified, segregated, or handled in order to ensure their safeguard or integrity. Protected cargo is subdivided into controlled, sensitive, classified, and pilferable.

3.37 Quantity. The number of units of issue (UI) (lb, oz, ea) in a unit pack, an intermediate or shipping container, or in a bundle or a secure lift. For medical material, the UI in a unit pack is one, normally expressed in a nondefinitive UI, such as "1 BT" or "1 BX." For nondefinitive UI, see 3.49.1.

3.38 Quantity per unit pack (QUP). The quantity of items in a unit pack given in the terminology of the definitive UI. For most medical material, the QUP is one.

3.39 Required delivery date (RDD). The ordinal day when the material is required by the requisitioner or consignee.

3.40 Semiperishable item. Item that does not normally require refrigeration or freezing during transportation and storage.

3.41 Serial number. The number on the item assigned by the manufacturer or the Government for identification or control.

3.42 Set. Unit or units and their assemblies, subassemblies, and parts that are connected or associated together to perform an operational function (e.g., tool set, radio receiving set, etc.).

3.43 Shelf-life. The total period of time beginning with date manufactured, date cured, date assembled, or date packed that an item may remain in the combined wholesale and retail storage system and still be suitable for issue and/or use by the user.

3.44 Shelf-life code (SLC). A code assigned to a shelf-life item to identify the period of time beginning with the date of manufacture, cure, assembly, or pack and terminated by the date by which an item must be used (expiration date) or subjected to inspection, test, restoration, or disposal action.

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3.45 Shelf-life item. Item of supply that possesses unstable or deteriorative characteristics to the degree that a storage time period must be assigned to ensure that the item will perform satisfactorily in service.

3.46 Shipping container. A container which meets carrier regulations and is of sufficient strength, by reason of material, design, and construction, to be shipped safely without further packing (e.g., wooden boxes or crates, fiber and metal drums, and corrugated and solid fiberboard boxes).

3.47 Transportation control number (TCN). A 17-position, alpha-numeric data element assigned to control a shipment unit through the transportation pipeline (to include CONUS shipments, shipments entering the DTS, and commercial systems). The TCN is the single standard shipment identification number for all DOD-sponsored movements (i.e., materiel and equipment and all vendor shipping transactions involving DOD materiel).

3.48 Unitization. Assembly of containers comprised of one or more line items of supply into a single load so that the load can be handled as a unit through the distribution system.

3.49 Unit of issue (UI). The UI is a standard or basic quantity expressed as a unit and indicated in a requisition, contract, or order as the minimum quantity issued (e.g., bottle, can, dozen, each, gallon, gross, pound, yard, etc.). For medical material, the UI is always one, with the unit pack containing the UI.

3.49.1 Nondefinitive unit of issue. A nondefinitive UI is a type of UI designation that does not indicate an exact quantity of volume, weight, linear measurement, or count such as drum, can, box, or roll. For medical material, when a nondefinitive UI is specified, such as "1 RO," a quantitative expression is included in the item description, such as "TAPE, ADHESIVE (100 FT)."

3.49.2 Quantitative expression. The exact quantity of volume linear measurement, weight, or count contained in a UI.

3.50 Unit pack. The first tie, wrap, or container applied to a single item, or a quantity thereof, or to a group of items of a singled stock number, preserved or unpreserved, which constitutes a complete or identifiable package. For medical material, the unit pack contains the UI, which is always one.

3.51 Warranty markings. Markings that apply when a shipment contains items with a service life defined in a specific amount of hours, a specific end date, or a specific operating time.

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4. GENERAL REQUIREMENTS

4.1 Abbreviations. Authorized abbreviations shall be those listed in the applicable service implementing directives. The correct unit of issue (UI) for marking is the UI shown in the procurement contract or order. When approved by the cognizant activity concerned, abbreviations of the item descriptions are permitted. Periods shall not be used with abbreviations.

4.2 Marking requirements. Medical material shall be marked as specified herein. The figures show the content and approximate location of identification, contract data, and bar code markings. Unit pack and intermediate and exterior container identification and contract data markings, which would normally be printed on the containers shown in the figures, have been replaced with the abbreviations "IDENT" and "CONTR," respectively. These abbreviations appear only in the figures, which are for guidance only. The terms "identification markings" and "contract data markings" are used throughout the text of this standard. Additional marking requirements (e.g., storage legends, shelf life, special markings for perishable material, and hazardous materials markings) shall be applied when applicable. The exact placement of these markings may vary slightly from those shown. Hazardous items shall be marked as specified herein and in 5.5 through 5.5.10. Bar code markings shall be applied as specified in 4.5 through 4.5.8.9.

4.2.1 Unit pack markings. For medical material, the unit pack contains the UI, which is always one (e.g., 1 EA, 1 BT, 1 BX, etc). A unit pack containing medical material is often referred to merely as a "unit." However, for purposes of this standard, the term "unit pack" shall be used. Application of the markings specified herein shall not interfere with the regulatory labeling and markings normally supplied in commercial practice. Bar codes are not required on the unit pack except when the unit pack also serves as the exterior (shipping) container.

4.2.1.1 Unit pack identification markings (see figure 1). When a contract or order requires that each unit pack of medical material be marked "as specified in MIL-STD-129-2," the following markings shall be applied in the order listed in addition to any marking requirements specified in the contract or order. When MIL-STD-129-2 is not specified in the contract or order, each unit pack shall be marked in accordance with commercial practice. For FSCs 6505/6508, the marking shall include only the NSN. For all other FSCs, the marking shall include the NSN, quantity and UI. Unit packs used as exterior containers at the time of packaging shall be marked in accordance with 4.2.3 and 4.2.3.1.

- a. NSN/NATO stock number. The NSN shall include appropriate spaces or dashes. The prefix "NSN" shall not appear.

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- b. Commercial and Government Entity (CAGE) code and product/part number (PN). The CAGE code of the company awarded the contract for the item described in "c" below followed by the PN assigned to the item shall be shown on the same line. The National Drug Code (NDC) may be used as the product number. If the item has no PN assigned or if none is required, then only the CAGE code of the company awarded the contract shall be shown. If a lack of space precludes listing the CAGE code and the PN on the same line, the PN may be shown on the line below the CAGE code. The letters "CAGE" and "PN" shall be used to identify this information.
- c. Complete item description or nomenclature. For item descriptions requiring three or more lines, readily identifiable abbreviations may be used, if necessary, provided the complete item description/nomenclature is supplied.
- d. Quantity and UI. In the event the quantitative expression is not part of the complete item description/nomenclature, the quantitative expression must be included with the quantity and UI (e.g., 1 RO (100 FT)).
- e. Contract number or purchase order number, together with the four-digit delivery order number (when applicable) and the lot (control) number (when required).
- f. Level of protection and date packaged (e.g., "A 2/92" or "C 2/92" indicates that level A or level C protection (preservation) was provided in February 1992).

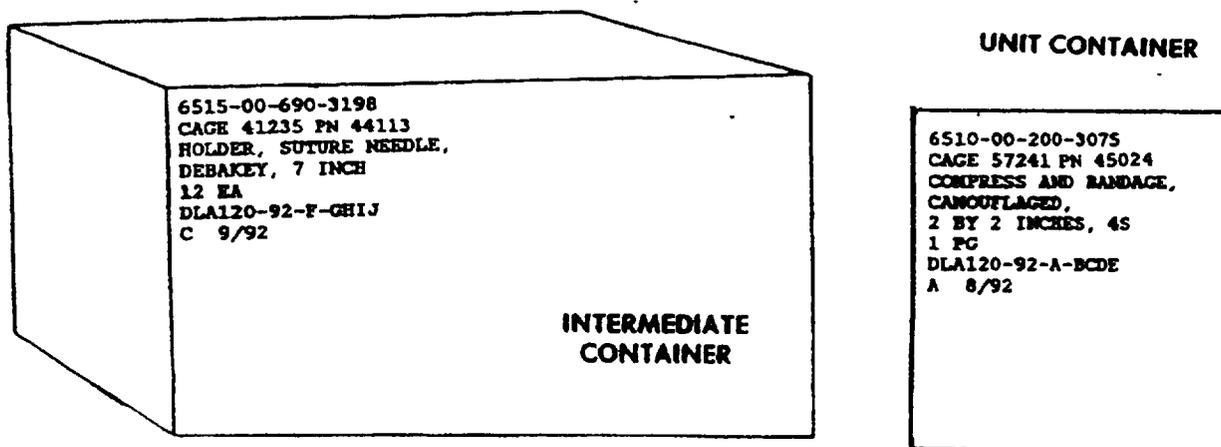


FIGURE 1. Unit pack and intermediate container identification markings.

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4.2.2 Intermediate container (package) identification markings (see figure 1). When an intermediate container (package) is required in the contract or order, each intermediate container shall be marked with the following information. Additional markings that are specified in the contract or order (e.g., shelf life, storage legends, etc.) shall be placed immediately below these markings. In addition, as specified in 4.5.2, the NSN shall be bar coded and applied above the identification markings.

- a. NSN/NATO stock number (see 4.2.1.1a).
- b. CAGE code and PN (see 4.2.1.1b).
- c. Complete item description or nomenclature (see 4.2.1.1c).
- d. Quantity and UI (see 4.2.1.1d). The number of units and UI designation shall be shown (e.g., "12 BT" or "144 EA").
- e. Contract number or purchase order number, together with the four-digit delivery order number (when applicable) and lot (control) number (when required).
- f. Level of protection and date packaged (e.g., "A 2/92" or "C 2/92").

4.2.2.1 Placement of identification markings on unit packs and intermediate containers. Markings on unit packs and intermediate containers shall be so located to allow the markings to be easily read when stored on shelves or when stacked and to ensure that the markings will not be destroyed when the pack or container is opened for inspection or until its contents have been used. The marking surface of a unit pack shall be the outermost wrap, bag, container, etc., of the unit pack. If the outer wrap of the unit pack is a transparent film wrap, markings shall be applied to the unit pack (carton). In addition, if the unit pack (e.g., bottle, tube, ampule, vial, etc.) is supplied in an individual carton, the markings specified herein shall be applied to the unit pack (carton). The required markings must be placed so as not to be obscured by any strapping or closure tape. Refer to figure 1 for the content and approximate placement of identification markings on unit and intermediate containers. For information on the placement of bar code markings on unit packs and intermediate containers, see 4.5.2.

4.2.3 Exterior (shipping) container identification markings (see figure 2). Unless specifically exempted in the contract or order, the following minimum identification information shall be marked on exterior containers in the order listed. Refer to figure 2 for the content and approximate placement of identification markings on exterior containers.

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- a. NSN/NATO stock number (see 4.2.1.1a).
- b. CAGE code and PN (see 4.2.1.1b).
- c. Complete item description or nomenclature (see 4.2.1.1c).
- d. Quantity and UI (see 4.2.1.1d).
- e. Levels of protection and date packed (e.g., "A/B 2/92" or "C/C 2/92" indicates level A (or level C) preservation, level B (or level C) packing, and February 1992 as the month and year the exterior container was packed). Inspection/test date and other shelf-life markings, when required, shall be applied as specified in 5.2.1. Unit packs used as exterior shipping containers shall be marked with the level of pack and date only (e.g., "B 2/92" or "C 2/92").
- f. Gross weight and cube (see 4.2.3.4).
- g. Proper shipping name (PSN) and North American (NA) or United Nations (UN) identification number, where assigned. The UN identification number contains the serial number assigned to the article or substance under the UN classification system. The PSN shall be distinct and separate from the description of the item and shall be placed immediately below the gross weight and cube data. The PSN is required even though it may be identical to the item description. For information on marking and labeling of hazardous materials, including the content and placement of UN-recommended performance-oriented packaging (POP) certification markings, see 5.5 through 5.5.10.

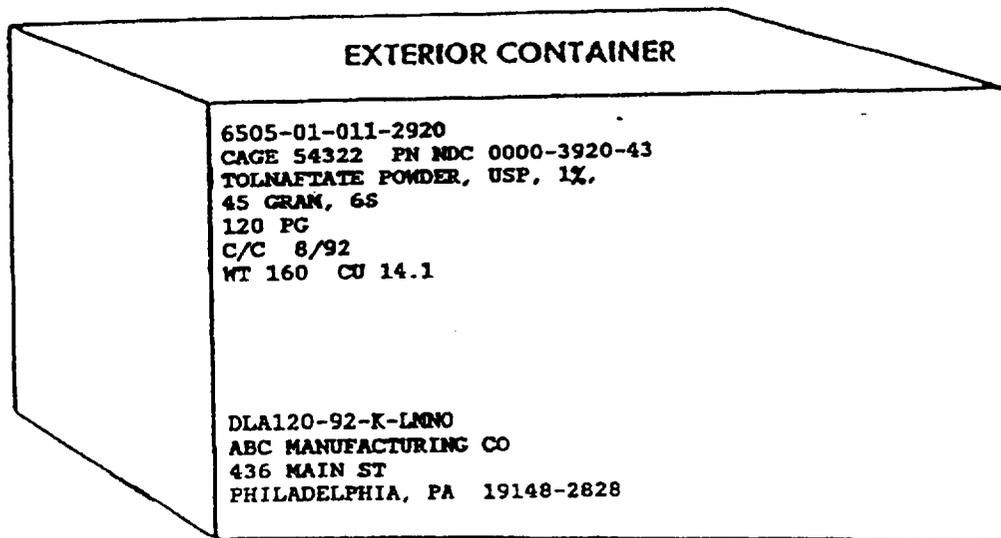


FIGURE 2. Exterior container identification and contract data markings.

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4.2.3.1 Exterior (shipping) container contract data markings (see figure 2). Unless specifically exempted in the contract or order, contract data markings shall include the following minimum information. Additional information may be required in the contract or order. When more than one contract is applicable to a multipack, contract data markings are not required on the exterior shipping container but shall be applied to each container in the multipack. Unless specifically required by a military Service or Agency directive, contract data markings are not required on exterior containers when items are repacked for shipment by military installations. Refer to figure 2 for the content and approximate placement of contract data markings.

- a. Contract number or purchase order number, together with the delivery order number (when applicable), modification for change order number (when used, and lot (control) number (when required) (see 4.2.1.1e).
- b. Prime contractor's name and address (including the nine-digit zip code), as it appears in the contract. When supplies are shipped from a subcontractor, only the name and address of the prime contractor shall be used.
- c. Applicable to medical clothing and textile items (e.g., clothing (physician's smocks, operating gowns, etc.), and disposable diapers, sheets, blankets, etc., managed by the Directorate of Medical Materiel, Defense Personnel Support Center (DPSC)). Accountability is necessary for clothing and textile items used in medical facilities. The following additional markings are required: shipment number; lot (control) number; name and address (including nine-digit zip code) of the manufacturer; and container number. The container number shall be consecutively numbered from each shipping point for the duration of the contract.

4.2.3.2 Placement of identification markings and contract data markings on exterior (shipping) containers (see figure 2). Identification markings shall be applied to the upper left two-thirds of the side of the exterior shipping container having the greatest overall, usable marking surface. Additional markings specified in the contract or order such as shelf life or storage legends shall be placed either below the identification markings, followed by the contract data markings, or in a conspicuous location on the identification-marked side of the container. Contract data markings shall be placed below the identification markings on the various exterior shipping containers. Protected cargo (controlled, sensitive, classified, and pilferable items) shall be marked as specified in these paragraphs and in 4.2.5. The address label shall be applied to the identification-marked side of the

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container and shall not interfere with any required markings. If adequate space is not available on the identification-marked side of the container, then the address label shall be placed on the opposite side. For information on the composition and placement of bar code markings on exterior containers, see 4.5.3 and 4.5.8 through 4.5.8.9, respectively.

4.2.3.3 Marking for assorted items.

4.2.3.3.1 Related items. When an assortment of related items which cannot be identified under one stock number but which support an end item is packed in a shipping container, the level of protection and date of pack (the date the shipping container was packed), gross weight, cube, and special markings shall be applied, along with a brief description of the contents in lieu of the entire identification data (e.g., spare parts to NSN XXXX). Kit or set components shall be segregated and identified within the unit pack by PN or NSN.

4.2.3.3.2 Unrelated items. When containers of unrelated items comprised of mixed NSNs which do not support an end item are consolidated into a shipping container, the container shall be marked with the following information in the order listed: the word "MULTIPACK" (line 1); the level of protection afforded the shipping container (level A, B, or C depending upon the type of shipping container used) and the date of pack (date the multipack itself was packed) (line 2); and the gross weight and cube (line 3). These markings are used in lieu of the exterior shipping container identification markings that are required by 4.2.3. Hand printing on multipack shipping containers is not permitted except for the gross weight and cube data and the date of pack.

Example: MULTIPACK
 A 2/92
 WT 100 CU 6

- NOTES: 1. In addition to any required shelf-life markings, the words "CONTAINS SHELF-LIFE ITEMS" shall be placed immediately below the identification markings on multipacks that contain shelf-life material.
2. The words "WARRANTED ITEMS INSIDE" shall be placed immediately below the identification markings on multipacks that contain items covered by a warranty.
3. For information on the marking of multipacks that contain hazardous materials, see 5.5.5.7.

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4.2.3.4 Marking of gross weight and cube (see figure 2). The capital letters "WT" and "CU" shall precede the gross weight and cube numerals. The gross weight shall be numerically indicated and shall be expressed in pounds rounded up to the nearest pound. The cube (cubic displacement) shall be calculated from the overall length, width, and height dimensions of the exterior shipping container, bundle, or secured lift. Irregular, cylindrical, or round items shall be considered to be rectangular solids. To calculate the cube, multiply the length by the width by the height in inches and divide the answer by 1728. The resulting cube shall be shown in cubic feet and shall be expressed in decimals rounded up to the nearest tenth of a cubic foot.

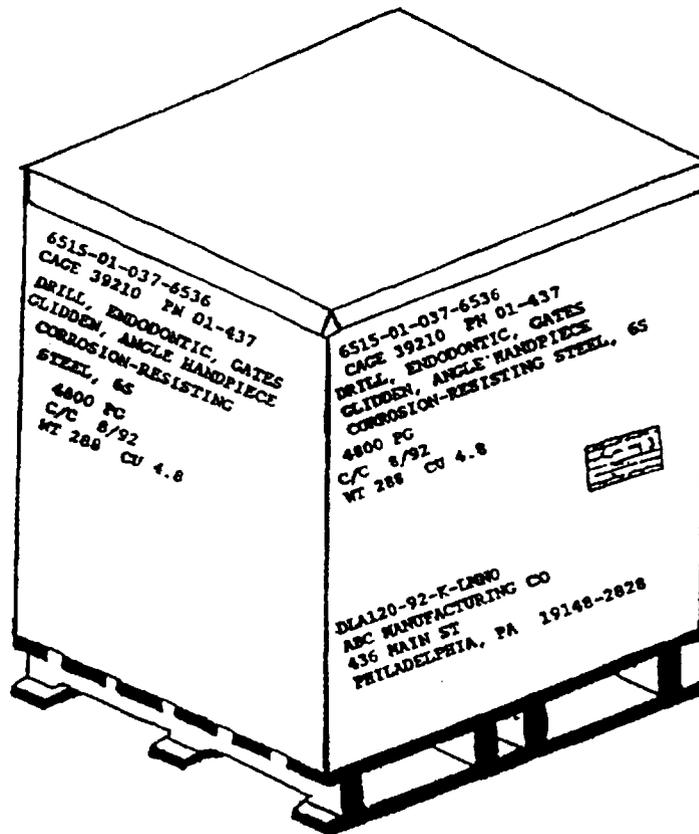


FIGURE 3. Exterior container identification, contract data, and address markings for a typical palletized unit load.

4.2.4 Palletized unit load markings (see figure 3). Identification and contract data markings shall be applied in the order listed in 4.2.3 and 4.2.3.1, respectively. Exterior container identification, contract data, and address markings shall be applied to one side of the palletized unit load as shown. The identification markings shall also be placed on the end of the

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unitized load that is to the left of the identification-marked side. Additional markings specified in the contract or order (e.g., shelf life, storage legends, etc.) shall be placed below the identification markings, followed on the next line by the contract data markings. Gross weight for palletized/containerized unit loads shall include the weight of the pallet or container base. The size of the lettering should be proportionate to the overall size of the unitized load. Bar code markings shall be placed on the identification-marked side and the identification-marked end of the palletized unit load as specified in 4.5.8.1 and 4.5.8.6. Palletized unit loads of controlled, pilferable, and sensitive items shall be marked as specified in 4.2.5 and 4.5.8.9. Palletized unit loads of hazardous items shall be marked as specified herein and in 5.5 through 5.5.10. For information on the placement of identification, contract data, and address markings on palletized unit loads, see 4.4.3.

4.2.5 Protected cargo (controlled, sensitive, classified, and pilferable) markings. Each unit pack and intermediate container of medical material shall be marked as specified in 4.2.1.1 and 4.2.2, respectively. Exterior shipping containers and palletized unit loads of medical material classified as protected cargo shall be marked as specified in 4.2.3, 4.2.3.1, and 4.2.5.1 for exterior shipping containers and in 4.2.4 and 4.2.5.1 for palletized unit loads. Bar code markings shall be applied as specified in 4.5.8.1 and 4.5.8.9. For medical material, the term "MEDICAL SUPPLIES" shall be used in lieu of NSN and item description (nomenclature).

4.2.5.1 Omission of markings on exterior (shipping) containers and palletized unit loads of protected cargo. Unless otherwise specified in the contract or order, the NSN and item description (nomenclature) shall be omitted in all instances from exterior shipping containers or palletized unit loads of protected cargo, including controlled, sensitive, classified, and pilferable items. Unless otherwise exempted in the contract or order, all other identification markings shall be applied as specified herein. The bar coded NSN, including human-readable interpretation, shall be omitted from exterior shipping containers and palletized unit loads containing controlled, sensitive, and pilferable medical material. However, the NSN, item description (nomenclature), and bar coded NSN shall not be omitted from exterior shipping containers and palletized unit loads of controlled, sensitive, and pilferable medical material which are also classified as hazardous materials. When the NSN and item description (nomenclature) have been omitted from exterior shipping containers of protected cargo, a packing list shall be placed inside the container. For multiple container shipments of protected cargo, the packing list shall be placed inside the No. 1 container.

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4.2.6 Deployable medical systems. Exterior shipping containers and palletized unit loads containing DEPMEDS items shall be marked as specified herein, except that identification and contract data markings shall be listed in the following order:

- a. NSN.
- b. Contractor's CAGE code (the company awarded the contract for the item) and PN, when applicable.
- c. Complete item identification.
- d. Quantity and UI.
- e. Levels of protection and date packed.
- f. Gross weight and cube.
- g. Serial number.
- h. Contract number.
- i. Contractor's name and address.
- j. Manufacturer's name. (See note)
- k. Type or model number.
- l. Electrical characteristics.
- m. Date of manufacture.
- n. Index No. _____. (See note)

NOTE. The manufacturer's name is required only when the item is manufactured by someone other than the contractor. The line following the "Index No." shall be left blank.

4.3 Address markings. Contractor- or vendor-originated address markings and military address markings shall be accomplished and applied as specified in 4.3.1 and 4.3.2 through 4.3.2.1, respectively, and in DOD 4500.32-R. When the material is palletized, address markings are not required on each exterior shipping container that comprise the palletized unit load. For contractor shipments, instructions for completion of the address markings may be obtained from the procuring activity. The preferred location for address markings on various exterior shipping containers is shown in the figures in this section. The exact placement of the address markings may vary slightly from those illustrated.

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4.3.1 Contractor- or vendor-originated address markings (see figures 4 and 5). A contractor or vendor making a shipment may apply address markings by silk-screening, stenciling, tags, or alternate labels (other than a DD Form 1387 (Military Shipment Label)), provided the procurement costs are not increased and the markings conform to the requirements of this standard. While it is preferred that contractors and vendors use the latest edition of the DD Form 1387 when shipping cargo to a CONUS (domestic) location, mandatory use of the address label is not yet required. In addition, contractors and vendors are not yet required to bar code the DD Form 1387 for deliveries to CONUS locations. However, when contractor- or vendor-originated shipments are destined for outside continental United States (OCONUS) locations and are shipped through the Defense Transportation System (DTS) (trans-shipment), they shall comply with the address marking instructions in DOD 4500.32-R, volume I, which require the address markings to be placed on a bar coded DD Form 1387. For these shipments, bar code labels may be affixed to the DD Form 1387 as an alternative to direct bar coding of the DD Form 1387 (see 4.3.2.2). Fleet Post Office (FPO) and Air Post Office (APO) addresses also do not, as yet, require usage of the DD Form 1387. Destinations such as Hawaii, Alaska, Puerto Rico, Canada, and Mexico are considered OCONUS sites and require bar coded DD Form 1387 address labels. The military shipment label shall be completed as specified in 4.3.2 and 4.3.2.1. The domestic shipment address for contractor- or vendor-originated shipments shall contain the following minimum information in the order listed. Any additional data required by the procurement contract shall be applied below the piece number and total pieces.

- a. Control Number or Reference Number: As a minimum, the Transportation Control Number (TCN) shall be provided as the single standard shipment identification number. In addition, the contract number, purchase order number, or Government Bill of Lading number may also be provided.
- b. From: Name and address of consignor (DOD activity address code (DODAAC) and in-the-clear address, if applicable).
- c. To: Name and address of the consignee (DODAAC and in-the-clear address, if applicable).
- d. Project Code and required delivery date, when required.
- e. Gross weight and Cube.
- f. Piece Number and Total Pieces.
- g. Additional data, when required.

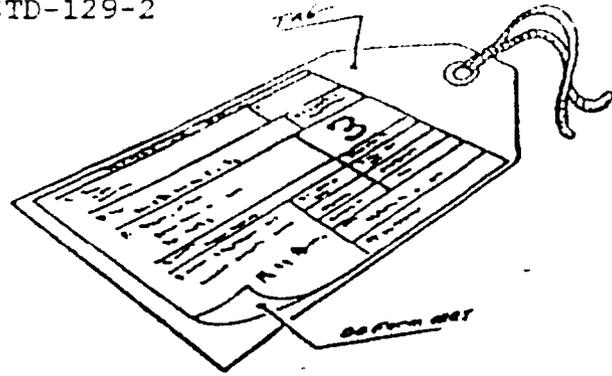
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TCN	W6262Q50980209XXX
B/L	#C271872
FM	T. J. BEAR MEDICAL CO MOSCOW, PA 18444-3297
TO	TRANSPORTATION OFFICER W25G1W TOBYHANNA ARMY DEPOT ATTN: AMXLS-ST TOBYHANNA, PA 18466-5096
PROJECT CODE:	ABC
RDD:	300
WT	70 CU 5.3
BOX	1 OF 2

FIGURE 4. Example of a domestic address label for a contractor- or vendor-originated shipment.

4.3.2 Military address markings (see figure 5). The DD Form 1387 shall be used as the address marking on all shipments of DOD cargo that are originated by DOD shipping activities. It shall be completed as specified herein and in DOD 4500.32-R and shall be prepared by automated or manual means (typewriter). Address labels prepared by automated means must be readable by humans and electronic devices. Address labels prepared manually must be readable by employees who are responsible for movement of cargo. Transportation priority (TP) 1, 2, or 3 shall be identified by a machine-printed, stenciled, stamped, hand-printed, or stick-on numeral placed in the TP block of the DD Form 1387. The minimum height of the TP numeral shall be three-fourths of an inch. When an automatic marking system is used, the applicable TP 1, 2, or 3 shall be identified by preprinting the TP numerals (printed with the same color ink as the other data on the label). Bar coded entries on the DD Form 1387 shall be as specified in 4.3.2.2. Hand printing is not authorized on the DD Form 1387 except for blocks 6, 10, 12, 13, 14, 16 and 17. If hand-printed entries are not readable by the receiving activity, a report of discrepancy (ROD) should be prepared. When a DD Form 1387 interferes with or obscures other required markings on a shipping container, the label shall be attached to a paper shipping tag (NSN 8135-01-256-1109) conforming to A-A-900. The tag is large enough (8" long by 7 1/2" wide) to accommodate the label without folding. Separate tags shall be used for identification and address markings.

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MILITARY SHIPMENT LABEL		Form Approved. OMB No. 0704-0188	
1. TRANSPORTATION CONTROL NUMBER		2. POSTAGE DATA	
3. FROM		4. TYPE SERVICE	
5. SHIP TO/POE		6. TRANS PRIORITY	
7. POD		8. PROJECT	
9. ULTIMATE CONSIGNEE OR MARK FOR	10. WT. (lbs per ct)	11. ROD	
	12. CUBE (cubic feet)	13. CHARGES	
	14. DATE SHIPPED	15. FMS CASE NUMBER	
	16. PIECE NUMBER		
	17. TOTAL PIECES		

DD Form 1387, NOV 86

Previous editions are obsolete

GPO : 1987 O - 171-241

FIGURE 5. Military address markings applied to a Military Shipment Label for a DOD-originated shipment.
The label may be attached to a paper shipping tag.

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4.3.2.1 Format of the DD Form 1387 (see figure 5). The format of the DD Form 1387 and the instructions for its completion are specified below and in DOD 4500.32-R, volume I.

- a. For shipments other than mail, the address label shall be completed as follows:
- (1) TCN: Enter the 17-character (alphanumeric) TCN, bar coded and in-the-clear. For consolidated shipments, a lead TCN must be placed in this block.
 - (2) Postage Data: Leave blank.
 - (3) From: Enter shipping activity's DODAAC and in-the-clear address. (See DOD 4000.25-6-M)
 - (4) Type Service: Enter Air Express, Overnight Delivery, Blue Label, etc., as applicable. If none, leave blank.
 - (5) Ship-to/Port of Embarkation (POE): Enter three digit air/water port code and in-the-clear port address.
 - (6) Transportation Priority: Enter applicable TP.
 - (7) Port of Debarkation (POD): Enter the three-digit POD port designator from DOD 4500.32-R, if appropriate.
 - (8) Project: Enter project code, if applicable.
 - (9) Ultimate Consignee/Mark For: Enter consignee's DODAAC, bar coded and in-the-clear, and consignee's complete mailing address.
 - (10) Weight (this piece): Enter actual gross weight.
 - (11) Required Delivery Date (RDD): Enter the RDD (day of the year such as 087 or 198), if appropriate. If the RDD is not appropriate, enter "000."
 - (12) CUBE (this piece): Enter cube.
 - (13) Charges: Enter CONUS inland freight charge on label of number one piece of the shipment unit (entry is mandatory for Foreign Military Sales (FMS) shipments).
 - (14) Date Shipped: Enter four-digit date (day of the year) (e.g., 0180) or in-the-clear date (e.g., 29 Jun 92).
 - (15) FMS Case Number: Enter as appropriate.

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- (16) Piece Number: Enter bar coded and in-the-clear.
- (17) Total pieces: Enter number of total pieces in the shipment unit.
- b. For mail shipments, the address label shall be completed as follows:
- (1) TCN: Enter the 17-character (alphanumeric) TCN, bar coded and in-the-clear.
 - (2) Postage Data: Use one of the following:
 - (a) For metered mail, leave blank and attach 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 in-the-clear address of shipping activity including zip code. The words "OFFICIAL BUSINESS" must be printed on the bottom line of this block.
 - (4) Type Service: Enter Express Mail, Military Ordinary Mail, First Class Priority Mail, etc., as applicable.
 - (5) Ship to/POE: For CONUS mail, enter the complete address of the consignee, including the nine-digit zip code. For mail to overseas locations, enter the postal concentration at the DTS port or MILSTAMP Air/Fleet Port Identifier (APO/FPO).
 - (6) TP: Enter appropriate TP.
 - (7) POD: Leave blank.
 - (8) Project: Enter project code, if applicable.
 - (9) Ultimate Consignee/Mark for: Enter consignee's DODAAC, bar coded and in-the-clear. For CONUS shipments, no other data is required to be entered. For OCONUS shipments, add the detailed address.
 - (10) Weight (this piece): Enter actual gross weight.

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- (11) RDD: Enter RDD, if appropriate.
- (12) CUBE (this piece): Enter cube.
- (13) Charges: Leave blank.
- (14) Date Shipped: Enter four-digit date (day of the year) (e.g., 0181) or in-the-clear date (e.g., 29 Jun 92).
- (15) FMS Case Number: Enter, if applicable.
- (16) Piece number: Enter bar coded and in-the-clear.
- (17) Total Pieces: Enter total pieces in shipment unit.

4.3.2.2 Data to be bar coded on the DD Form 1387 (see figure 6). Using either the preprinted or generated form, those DOD sites that have the capability shall bar code the following data on the DD Form 1387 in accordance with DOD 4500.32-R. This is in addition to the required human-readable.

- a. TCN in block 1 (17 characters).
- b. Ultimate Consignee (DODAAC) in block 9 (6 characters).
- c. Piece Number in block 16 (4 characters).

MILITARY SHIPMENT LABEL DD FORM 1387		
1. TRANSPORTATION CONTROL NUMBER  46262050980209XXX		2. POSTAGE DATA
3. FROM		4. TYPE SERVICE
5. SHIP TO / POE		6. TRANS PRIORITY
7. POB		8. PROJECT
9. ULTIMATE CONSIGNEE OR MARK FOR  46262R		10. WT
		11. ROD
		12. CUBE
		13. CHARGES
		14. DATE
		15. FMS CASE NO
16. PIECE NO  0004		
17. TOTAL PIECES		

FIGURE 6. Sample of a bar coded Military Shipment Label.

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4.3.2.2.1 Human-readable interpretation. The HRI of the bar coded DODAAC and piece number shall appear either below the bar code or in-line with the bar code (see figure 6). When in-line, a 0.25 inch quiet zone is required between the bar code and the HRI.

4.3.2.3 Size of the DD Form 1387. For those sites having the capability to generate the DD Form 1387 as well as the data, the form may be reduced in size but shall not be any smaller than 4.0 inches in height by 5.0 inches in width (101.6 by 127.0mm) or 5.0 inches in height by 4.0 inches in width (127.0 by 101.6mm). The basic format shall remain the same. See figure 5 for the basic address label format and figure 6 for a sample of a reduced-in-size label containing bar coded data. Both the labels and bar codes in figures 5 and 6 have been reduced in size for ease in publication.

4.3.3 Affixing the contractor/vendor or military address label to the exterior (shipping) container. When the outside surface of the exterior shipping container does not lend itself to direct application of the address label, the label shall be attached to a suitable paper shipping tag (see 5.1.3) or to a marking board or marking panel (see 5.1.9).

4.3.4 DOD shipments sent through the U.S. Postal Service. Shipments originated by DOD activities and sent through the U.S. Postal Service must have the words "OFFICIAL BUSINESS" printed on the bottom line of the "FROM" block of the DD Form 1387. These words, which are required by the Domestic Mail Manual, may be overprinted, typewritten, or applied by rubber stamp, with no exceptions. All DOD activities must employ the direct accountability methods (permit imprint or meter) when using the U.S. Postal Service. The appropriate postage mail authorization shall be applied in the "Postage Data" block.

4.3.5 Direct mail pouch shipment. If a U.S. Postal Service mail pouch is used as the outer container for the mailing of more than one interior container as a direct pouch shipment to the addressee, each interior container in the pouch shall have a DD Form 1387 attached.

4.3.6 Full carload and full truckload shipments. Full carload and full truckload shipments moving from a single consignor to a single consignee require at least one completed address label attached to the container or palletized load that is located closest to the door. Additional address labels may be placed on other containers or palletized unit loads in the shipment. A domestic address label (DD Form 1387 or approved substitute) shall

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also be placed on all shipping containers, palletized unit loads, and unpacked items for less than carload and less than truckload lots.

4.3.7 Regional Freight Consolidation Center shipments. For vendor-originated shipments destined for delivery to a materiel consolidation point (MCP), the shipment shall be addressed to the designated MCP, with the ultimate receiving depot listed as the "MARK FOR" address.

4.4 Placement of identification, contract data, and address markings on exterior (shipping) containers. Unless otherwise specified in the procurement contract or purchase order, exterior shipping container identification, contract data, and address markings shall be applied as specified herein. The exact location of these markings may vary slightly from those shown. Markings on specific containers shall be placed in accordance with the instructions contained in the following paragraphs. If a container is too small to accommodate the address markings on the identification-marked side, the address markings/label shall be applied on the opposite side of the container. The required markings shall not be obscured by cleats, strapping, or closure tape. Unless otherwise specified in the procurement contract or purchase order or when required by the carrier, such as parcel post, the right end (the end to the right of the identification-marked side of the container) and the top and bottom of each container shall always be free of any markings. Marking materials and the size of markings shall comply with the requirements in 5.1.1 through 5.1.10. Bar code marking requirements are discussed and illustrated in 4.5 through 4.5.8.9.

4.4.1 Boxes and crates (see figure 7). All sizes of boxes and crates shall have the identification markings applied as specified in 4.2.3. In addition, boxes and crates that are 10 cubic feet and over shall have the identification markings placed on the end of the container that is to the left of the identification-marked side. Placement of identification markings on the end of boxes and crates under 10 cubic feet is optional. An additional address label may be placed on the identification-marked end for styles which, because of their configuration, allow access by materials handling equipment only to the end of the container. Regardless of the size of the container, identification and contract data markings shall be stenciled or printed directly on the container or applied by use of a stenciled or preprinted label. When no other adequate marking surface is available, cleats may be used as part of the marking surface. When the exterior surface is not suitable for direct application of markings, a marking board or marking panel shall be used (see 5.1.9).

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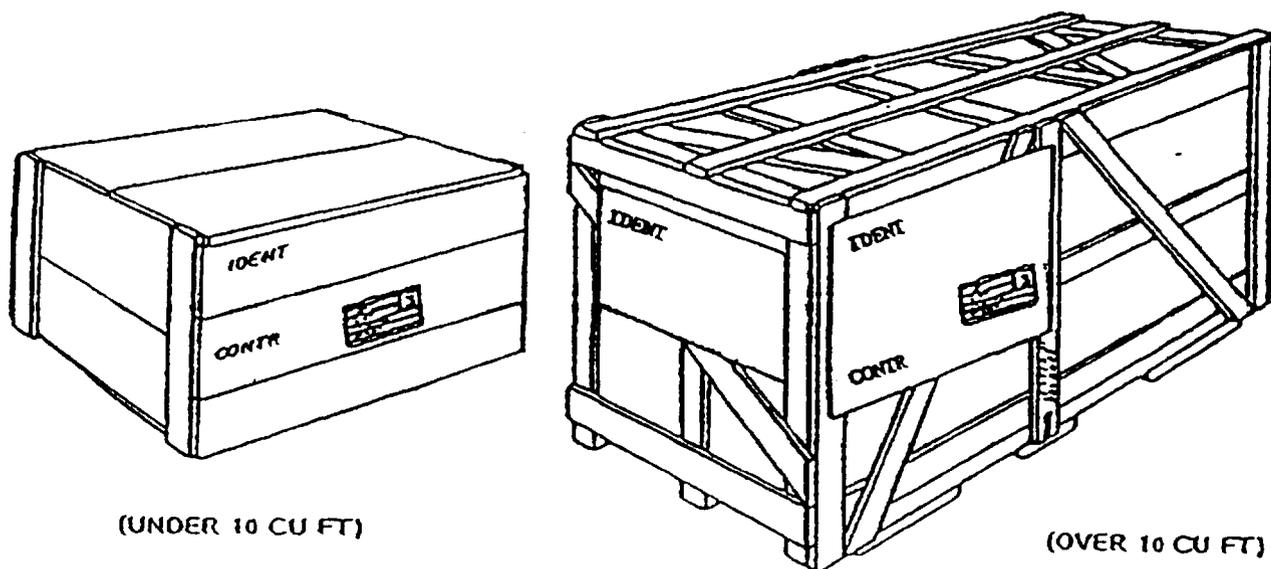


FIGURE 7. Placement of identification, contract data, and address markings on boxes and crates.

4.4.2 Cylindrical containers (including empty containers) (see figure 8). Identification and contract data markings shall be stenciled or preprinted on the upper one-third of filled pails, kegs, drums, and reusable metal containers. However, when space is not available, contract markings shall be shown diametrically opposite the identification markings. In addition to the required markings on 50- and 55-gallon drums from which the heads are not removed, identification data (less weight and cube), contract data, and shelf-life markings, when required, shall also be shown on the head. Forest-green containers shall be marked with yellow or white lettering. Although the preferred methods of application are stenciling and preprinting, labels or tags may be used when the container is too small for either method. However, unless otherwise approved by the cognizant activity, labels or tags shall not be used for identification and contract data markings on metal containers, unless the containers are too small to accommodate the stenciled or preprinted markings. If labels are used for these markings, then only pressure-sensitive labels shall be used on cylindrical containers and metal drums. On empty drums and cylindrical containers, the identification and contract data markings shall be applied on the top and upper one-third of the side by attaching labels or tags. The preferred location for the address

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label is on the middle one-third of the container. However, if space is not available in this location, the address label shall be placed in a conspicuous location in close proximity to the identification markings. If space is not available on the surface of the container for the address label, then the label shall be placed on a shipping tag.

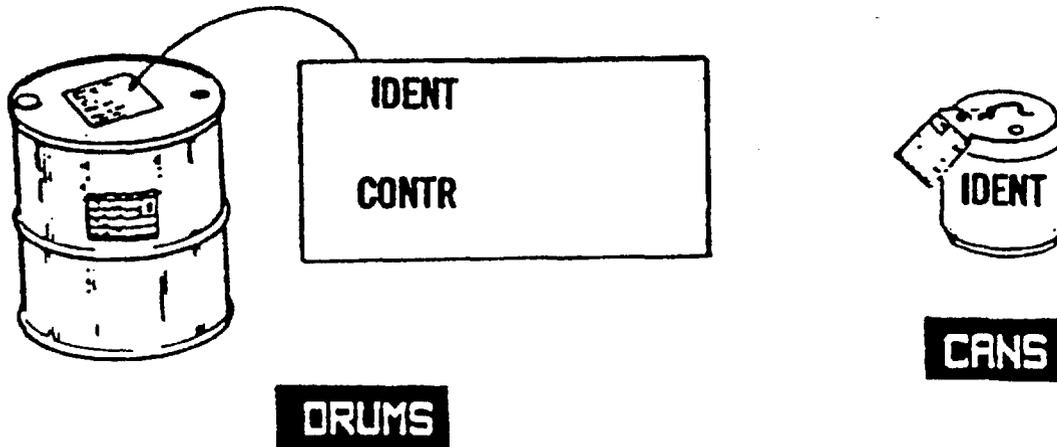


FIGURE 8. Placement of identification, contract data, and address markings on cylindrical containers.

4.4.3 Palletized unit loads (see figure 3). When a palletized unit load is formed, the individual containers comprising the unit load shall already be marked with the applicable identification and contract data information. The palletized load shall be built on the pallet so that the markings on the individual containers do not show on one side and the adjacent end of the pallet load. The palletized unit load shall have the exterior shipping container identification, contract data, and address markings applied as specified herein and as shown in figure 3. For palletized unit loads 10 cubic feet and over, additional identification markings are required on the end of the load that is to the left of the identification-marked side. When a suitable fiberboard container such as a triple-wall fiberboard box is used for unitizing a load in lieu of palletization, all of the required markings, including the address marking, 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

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or stored, the markings must be large enough to be read from a distance. The size of the lettering (see 5.1.10) should be proportionate to the overall size of the unitized load but shall be not less than three-fourths of an inch in height. For information on the marking of palletized unit loads of hazardous materials that are in the DOD stockpile, see 5.5.5.8. For bar code markings on palletized unit loads, see 4.5.8.1 and 4.5.8.6.

- a. All palletized loads shall be identified by placing the exterior container identification and contract data markings on a marking board/panel by using a stenciled label or by direct stenciling. Palletized loads that have smooth, flat surfaces, may have the identification markings stenciled directly on two surfaces, with the markings extending from one container to another. However, contract data markings shall be applied to only one surface of the load.
- b. Except for medical clothing and textile items, palletized loads of containers of items that have different NSNs shall be marked as multipacks.
- c. When a palletized load is covered with stretch-wrap film, pressure-sensitive labels containing the identification, contract data, and address markings may be placed on the outermost layer of wrap on either side of the load, in addition to the other required markings. Labels shall be placed on either the identification-marked side of the load or on the opposite side and shall be marked in any prescribed method (see 5.1.8). 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). If this method is used, no pressure-sensitive labels should be placed on the outermost layer of wrap.

4.4.4 Commercial- or Government-owned (or -leased) shipping containers (SEAVANs) and military-owned demountable containers (MILVANs) (see figure 9). Exterior container identification and contract data markings shall not be placed on the outside of a SEAVAN/MILVAN. A completed DD Form 1387 address label shall be attached to the seal on the SEAVAN/MILVAN or shall be attached at the rear of each SEAVAN/MILVAN. Shipping containers, palletized unit loads, and unpacked items that are consolidated into a full SEAVAN/MILVAN load by the shipper of origin for delivery as a unit to the ultimate consignee do not require individual address markings. In addition, consolidation activities who receive shipments for consolidation into SEAVANs or MILVANs are not required to obliterate address labels applied by the shipper of origin.

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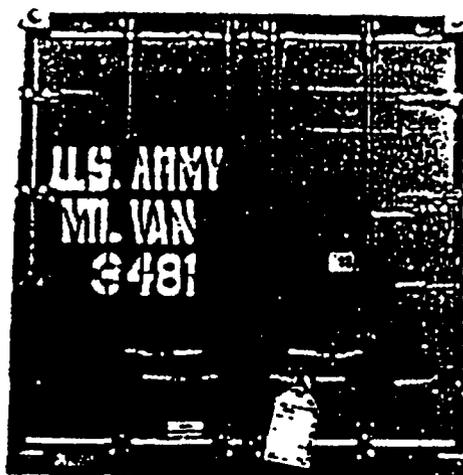


FIGURE 9. Placement of address markings (DD Form 1387 attached to a paper shipping tag) for a SEAVAN or MILVAN.

4.5 Bar code marking requirements. Except as specified herein, bar code markings are required on all containers and palletized unit loads of medical material. Information and illustrations on the content and placement of bar code markings on containers of medical material are in 4.5.1 through 4.5.8.9. Bar code marking requirements for DD Forms 1348-1 (DOD Single Line Item Release/Receipt Document) and 1348-1A (Issue Release/Receipt Document) are in 5.4.5. Bar code marking requirements for DD Form 1387 are in 4.3.2.2. Bar code labels may be accepted with a Certificate of Conformance (COC) when objective evidence can be provided.

4.5.1 Application of bar code markings on all containers and palletized unit loads. The bar code and HRI that are applied shall be the standard DOD symbology as described in MIL-STD-1189. The HRI shall be an exact interpretation of the bar code data and shall not contain any spaces or dashes. The preferred HRI location is below the bar code markings, while the optional HRI location is above the bar code markings.

4.5.2 Information to be bar coded on unit packs and intermediate containers (packages) (see figure 10). As specified in 4.2.1, bar codes are not required on the unit pack. However, if the unit pack is also the exterior shipping container, then bar codes shall be applied as specified in 4.5.3. On intermediate containers, the NSN shall be bar coded and applied above the identification markings. The bar coded NSN shall consist of the basic 13 data characters. Prefixes and suffixes to the stock number, as well as spaces and dashes, shall not be bar coded. In addition, the part number assigned to the item shall not be bar coded.

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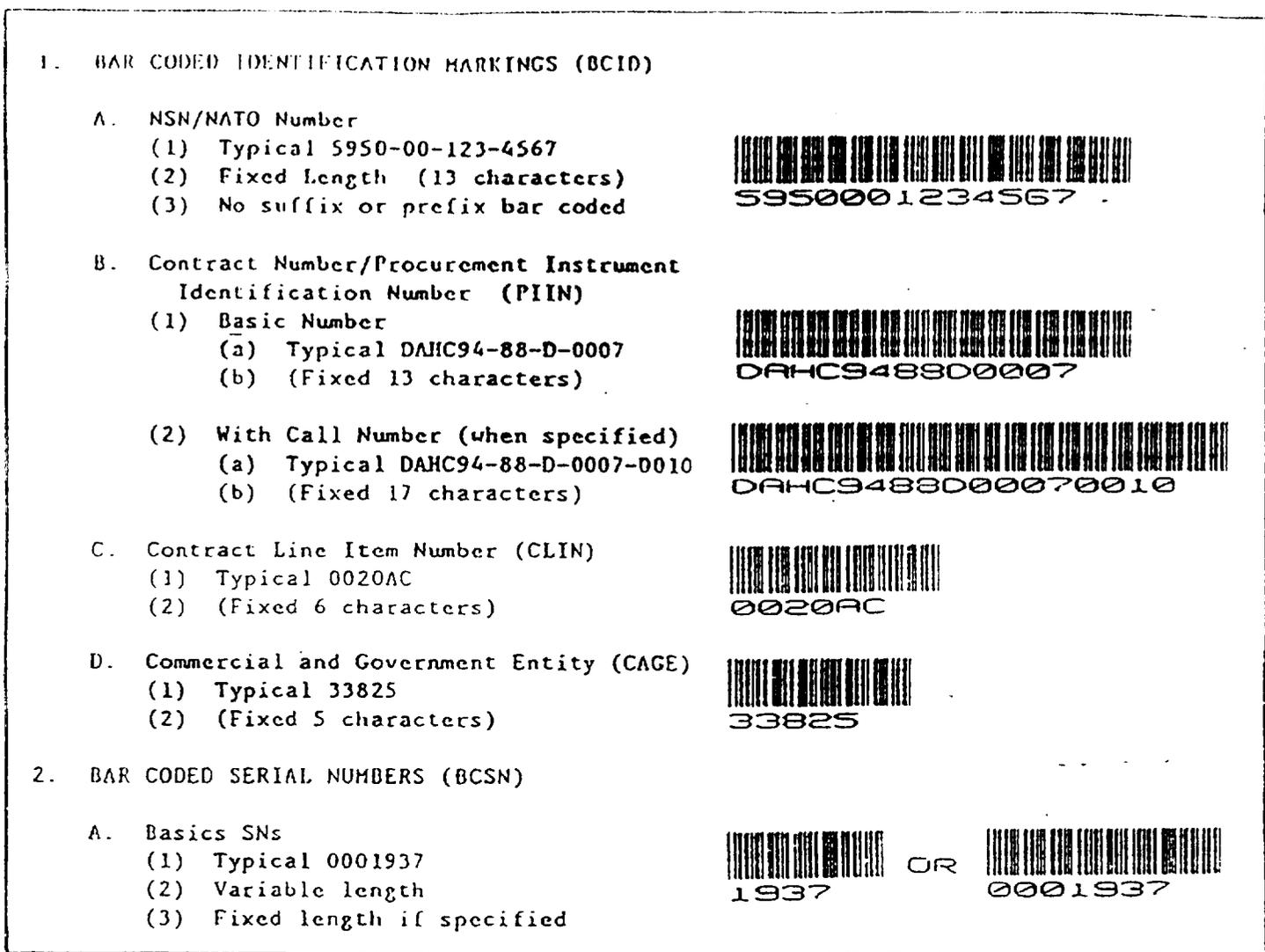


FIGURE 10. Examples of typical bar coded fields.

4.5.3 Information to be bar coded on exterior (shipping) containers (see figure 10). For all contracts, each exterior shipping container shall be bar coded with the NSN/NATO stock number; contract or order number (including four-digit delivery order or call number, when applicable); CAGE code of the company awarded the contract; and the contract line item number (CLIN), when used. The NSN shall be bar coded as specified in 4.5.2. The bar coded contract or order number (including the delivery order or call number) shall consist of 13-17 data characters; the CAGE code shall consist of 5 data characters; and the CLIN shall consist of 6 characters, including zero fillers that are placed to the left of the number (e.g., 0001AB).

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4.5.4 Bar code configurations and basic message formats (see figure 11). The two bar code configurations are vertical (ladder) and horizontal (picket fence). Unless otherwise specified in the contract or order, all bar codes shall be in a horizontal configuration. The two basic message formats are stacked and in-line. When only two or three data messages are bar coded, one of the two basic formats can usually be utilized. However, a stacked format is preferred. When three or more data messages are bar coded in an in-line format, the minimum spacing between messages shall be increased so that false reads will not occur when using a non-contact scanner.

4.5.4.1 Bar code format requirements (see figure 11). The following format requirements are listed in order of preference based on ease of readability without false read when using either contact or non-contact scanners. The marking technology shall also be considered when determining which format to use.

- a. Two bar coded messages:
 1. Stacked.
 2. In-line.
- b. Three or four bar coded messages:
 1. Single stack.
 2. Combination (e.g., 2 stacks of in-line bar codes).
 3. Staggered (e.g., 2 staggered stacks of 2).
- c. Five to 10 bar coded messages:
 1. Single stack.
 2. Staggered (e.g., 2 to 4 stacks of staggered bar codes).
 3. Combination (e.g., 2 stacks of in-line bar codes).
- d. Eleven or more bar codes:
 1. Single stack (if space permits).
 2. Staggered (several possible arrangements).
 3. Combination (if 3 or more stacks are required, the minimum spacing between stacks is increased from .5 to 2.25 inches (12.7mm to 57.15mm)).

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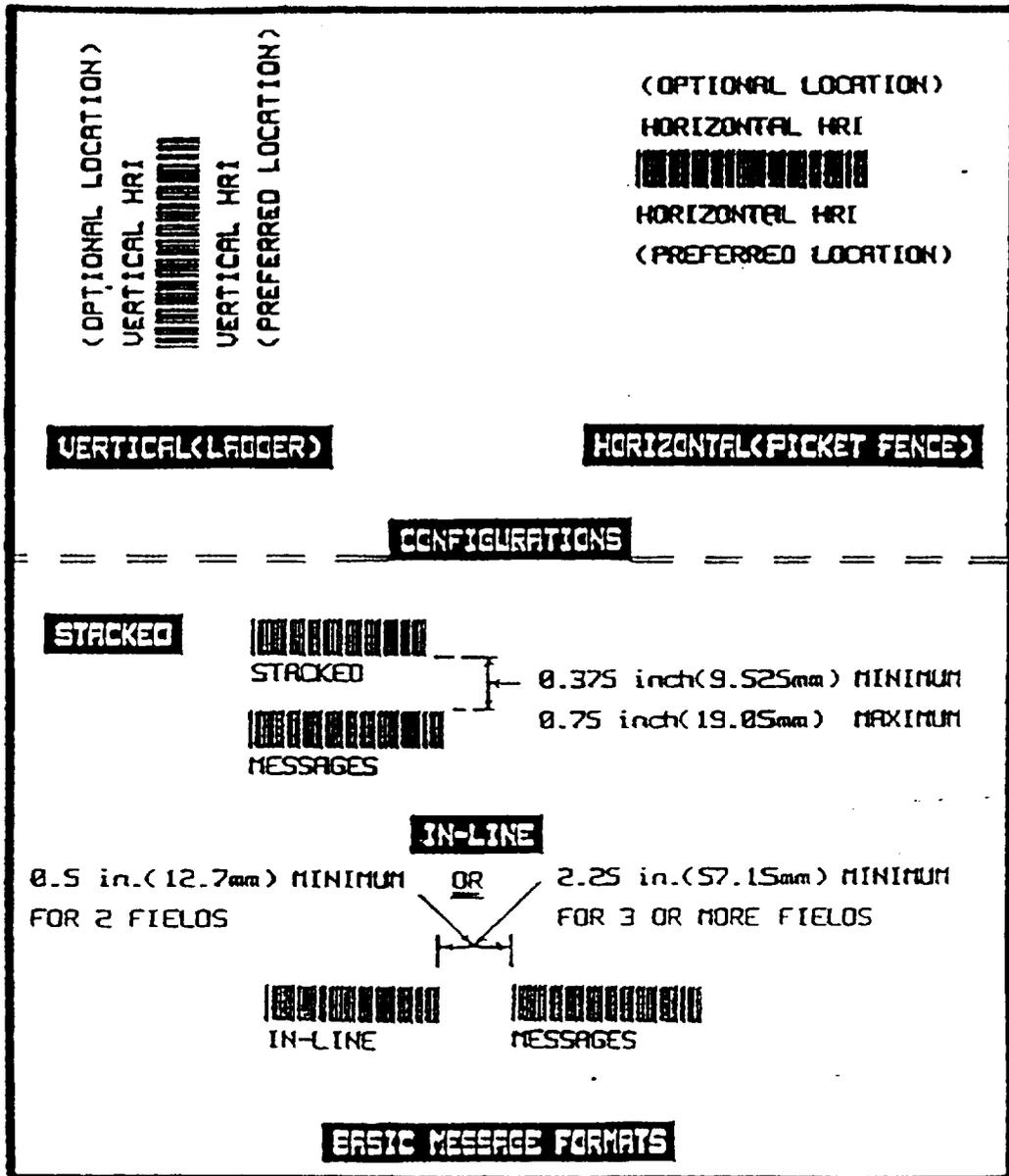


FIGURE 11. Bar code configurations and basic message formats.

4.5.5 Bar code character density. The standard bar code density range shall be from 3.0 to 9.4 characters per inch (CPI). When a direct-marking process is used to bar code exterior shipping containers, a bar code character density range of 1.7 to 3.0 CPI may be used. Higher bar code densities in the range of 9.4 to 15.5 CPI may be used, when specified, for unique applications.

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4.5.6 Methods of applying bar codes. On containers other than wood, bar code markings shall be applied either by labeling or by direct printing on the container. On wood containers, bar code markings shall be applied only by the use of labels. When an untinted/transparent laminate or equivalent or a stretch/shrink wrap is placed over the bar code labels, the bar code symbol shall meet the readability requirements of MIL-STD-1189. When the requirements of MIL-L-61002 are specified in the procurement contract, the bar code label shall meet the durability requirements of MIL-L-61002 for the applicable grade.

4.5.6.1 Labels on unit packs and intermediate containers. No bar code label is required on a unit pack, unless it is also the exterior container. When MIL-STD-129-2 marking requirements are specified in the contract or order, as a minimum, labels on intermediate containers shall be constructed of a computer-imprintable paper with a 1-mil acrylic permanent adhesive, or equivalent. Printer ribbons of optical character reader (OCR)-grade quality, or equivalent, shall be used to mark the labels. When MIL-L-61002 requirements are specified in the contract, bar code labels shall meet the requirements for a Grade C label. When the unit pack and the exterior shipping container are one and the same, only exterior container bar code markings shall be applied.

4.5.6.2 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, untinted/transparent, plastic, protective laminate such as PPP-T-60, type III, class 2 tape, or equivalent protection, shall be applied to or shall be inherent to the label. PPP-T-60, type III, class 2 tape applied over a MIL-L-61002, Grade C label will upgrade that label to a MIL-L-61002, Grade B label. The bar code quality shall remain in conformance with MIL-STD-1189 after the protective coating has been applied. When MIL-L-61002 requirements are specified by the procuring activity, the labels used for bar coding shipping containers shall meet the following minimum requirements:

- a. Labels used on all wood containers shall conform to MIL-L-61002, Grade A, Style 1, Composition (b) for non-porous container surfaces or Grade A, Style 2, Composition (b), for porous surfaces.
- b. Labels on all other containers shall be as follows: pre-printed labels shall have an untinted, transparent laminate coating, while non-preprinted labels shall have the laminate (or equivalent) applied after the bar code is printed. As a minimum, labels shall be constructed of computer-imprintable paper with a 1-mil acrylic permanent adhesive or equivalent.

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Labels shall conform to MIL-L-61002, Grade A, Style 1, Composition (b) for metal and plastic containers or Grade B, Style 2, Composition (a) for domestic or weather-resistant fiberboard containers.

4.5.7 Placement of bar code markings on unit packs and intermediate containers (see figure 12. As stated in 4.5.6.1, unit packs shall not be bar coded unless they are also the exterior container. The NSN shall be bar coded and applied on intermediate containers so that the bar code is in the configuration shown in figure 12. In addition to the HRI section of the bar code markings, the NSN/NATO stock number, including any spaces or dashes and prefixes or suffixes, when applicable, shall be marked in-the-clear as the first line of the identification markings. When bar coded serial numbers are required on intermediate containers, the bar codes shall be located directly below the identification markings preceded by the abbreviation "SER NO." When more than five serial-numbered items are in an intermediate container, the rules for bar coded serial numbers on an exterior shipping container shall apply as specified in 4.5.8.2.

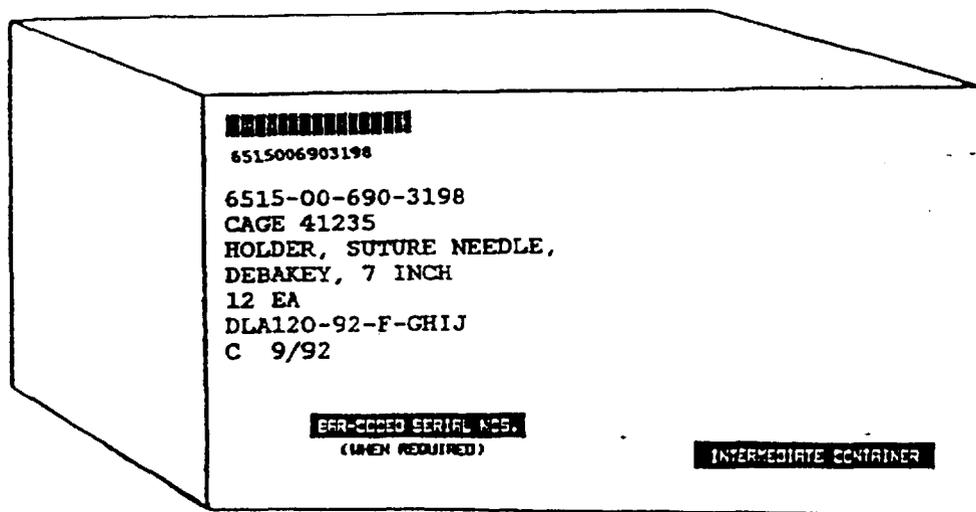


FIGURE 12. Bar code markings on intermediate containers.

4.5.8 Placement of bar code markings on exterior (shipping) containers.

4.5.8.1 Boxes and crates under 10 cubic feet and those 10 cubic feet and over (see figures 13 and 14, respectively). Regardless of size, all boxes and crates used as exterior shipping containers shall have the NSN/NATO stock number, contract or order number,

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CAGE code, and CLIN bar coded and applied on the identification-marked side of the container. Bar code symbols shall be located adjacent to the identification markings (either to the right of or below) and shall be in a horizontal (picket fence) configuration. For boxes and crates 10 cubic feet and over, bar code markings are also required on one end of the container as shown. When a marking board or marking panel is used for unshathed crates, the bar code markings shall be applied immediately to the right of or below the contractor markings and shall be in line with them.

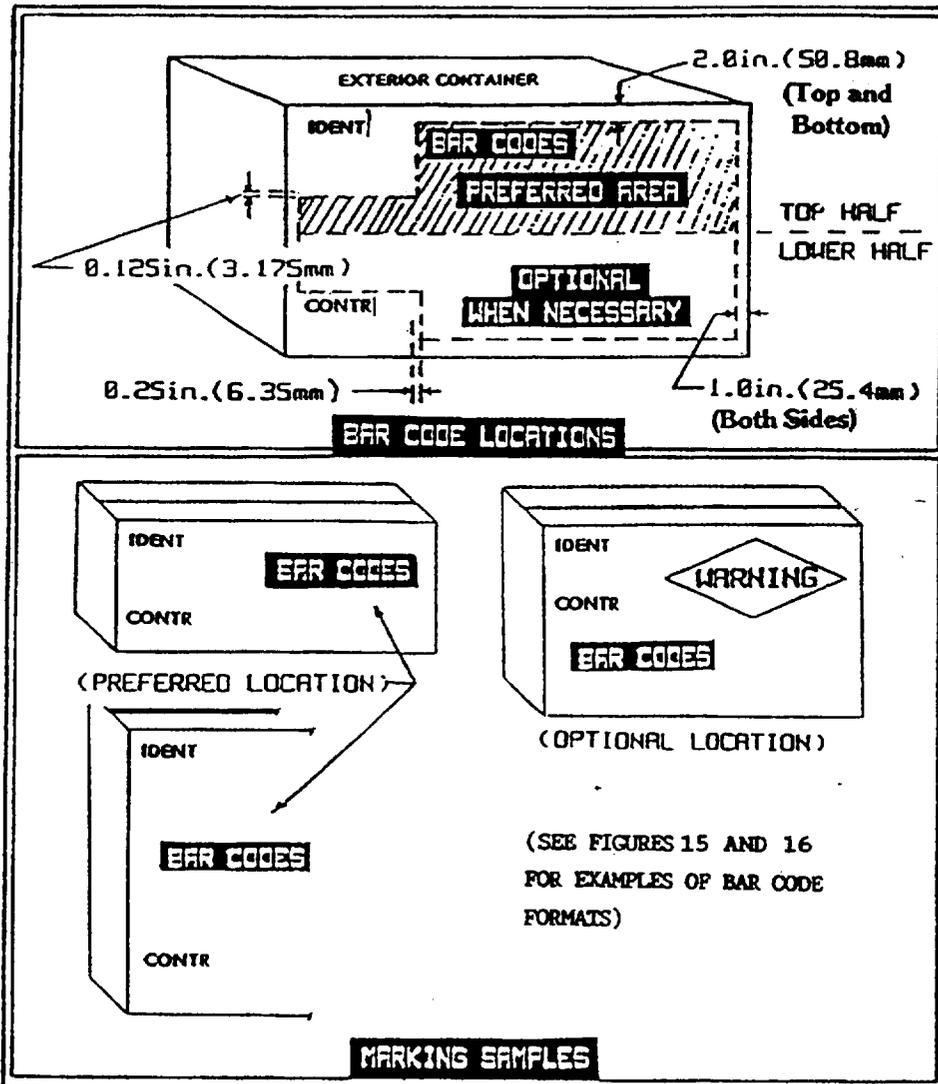


FIGURE 13. Exterior container bar code markings for boxes and crates under 10 cubic feet.

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4.5.8.1.1 Location of the bar code (see figure 13). The bar code shall be applied at minimum distances of 2.0 inches (50.8mm) from the top and bottom edges and 1.0 inch (25.4mm) from the side edges. A minimum distance (quiet zone) of 0.25 inch (6.35mm) from the nearest identification marking shall be maintained. When bar codes are located below identification or contract data markings, a minimum separation of 0.125 inch (3.18mm) shall be maintained between the markings and the top of the symbol. When cleats, strapping, or other required markings interfere with the placement of bar code markings, the bar code markings shall be placed as near as practicable to the prescribed data.

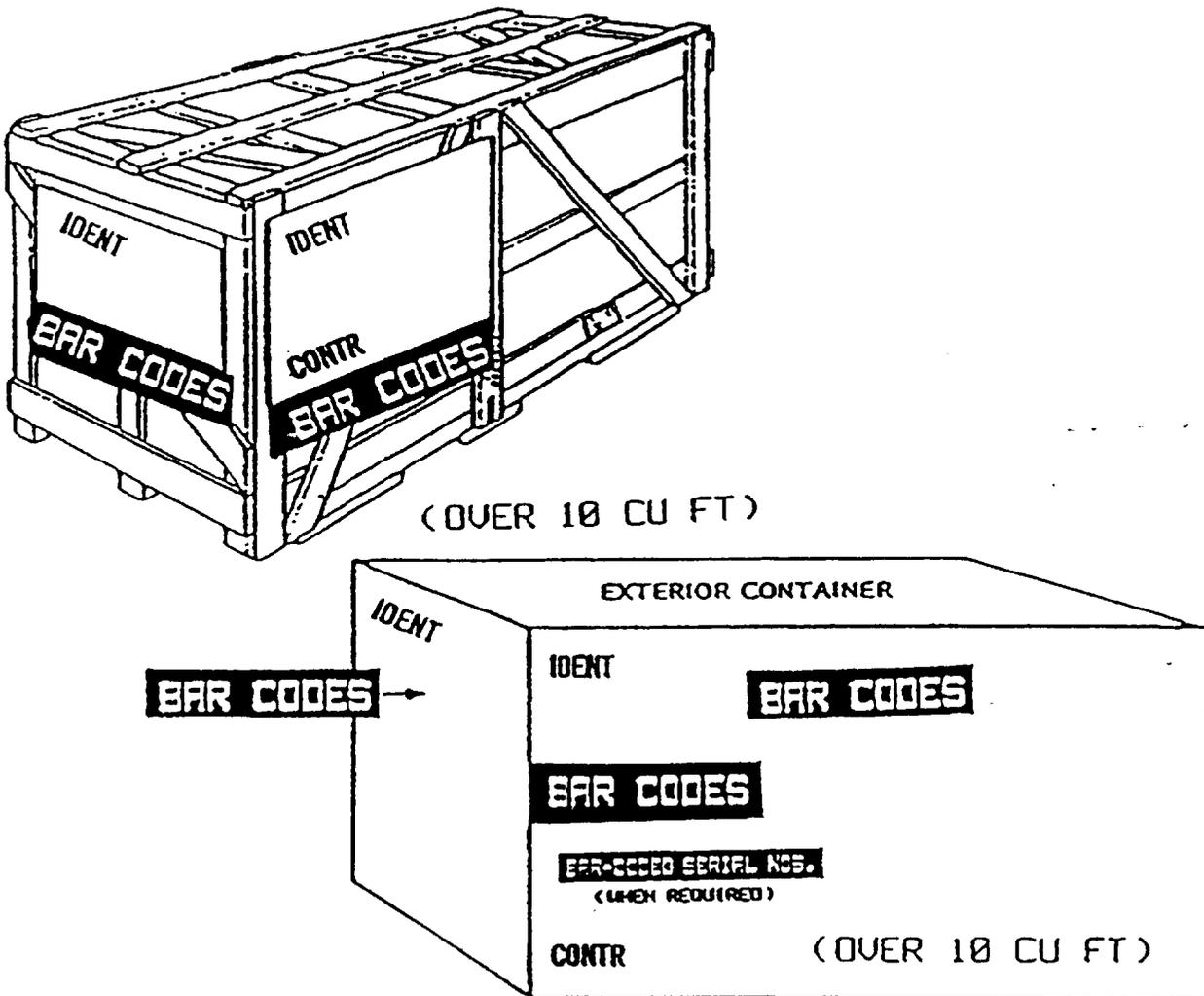


FIGURE 14. Exterior container bar code markings for boxes and crates 10 cubic feet and over.

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4.5.8.2 Bar coded serial numbers on exterior (shipping) containers (see figure 14). When a requirement for bar coded serial numbers is specified in the contract or order, the bar codes shall be located directly below the identification markings and shall be preceded by the abbreviation "SER NO." The letters "SER NO" are not required to be bar coded. The bar codes shall be arranged in a stacked, in-line, or combination format. If more than five bar codes are required on intermediate or exterior containers, two serial number lists shall be provided. The first list, which is to be placed inside the container, shall contain a bar code for each serialized item. The bar code format to be used is optional. A staggered format is recommended when more than 20 serial numbers are bar coded. Bar coding of the second serial number list, which is to be included with the packing list, is optional. The words "SERIAL NUMBER LIST INSIDE" shall be marked on the identification-marked side of the container.

4.5.8.3 Formats for bar coded data on exterior (shipping) containers and tags (see figures 15 and 16). Unless otherwise specified, bar codes required on all exterior shipping containers shall be applied in one of the formats listed below, shown in the order of preference and illustrated in figures 15 and 16. When space does not permit the proper placement of bar codes on the identification-marked side of a container, the bar codes may be placed on an adjacent end or on the opposite side. Any bar code format discussed herein may be applied to a tag attached to a shipping container. Tags should be marked by either direct marking or by applying pressure-sensitive labels. If space is available on the identification tag, the bar code label/markings may be applied to the right of the identification markings or below the contract data markings. If space is not available on the identification-marked side of the tag, the bar code label/markings may be applied on the reverse side of the tag.

- a. A single four-field stacked format with the data fields stacked from top to bottom in the following order: NSN, contract number, CAGE code of the company awarded the contract, and CLIN (see figure 15). When a stacked format is used, the bar codes shall be left-justified (left-hand (start) characters vertically aligned). For examples of two-, three-, and four-field format options, see figure 15.
- b. A combination format arranged so that the NSN is above the contract number in the first stack and the CAGE is above the CLIN in the second stack, or a combination format that has the NSN on line one, the contract number on line two, and the CAGE followed by the CLIN on line three (see figure 16).
- c. A staggered format, with NSN and contract number in one stack and CAGE and CLIN in the other (see figure 15).

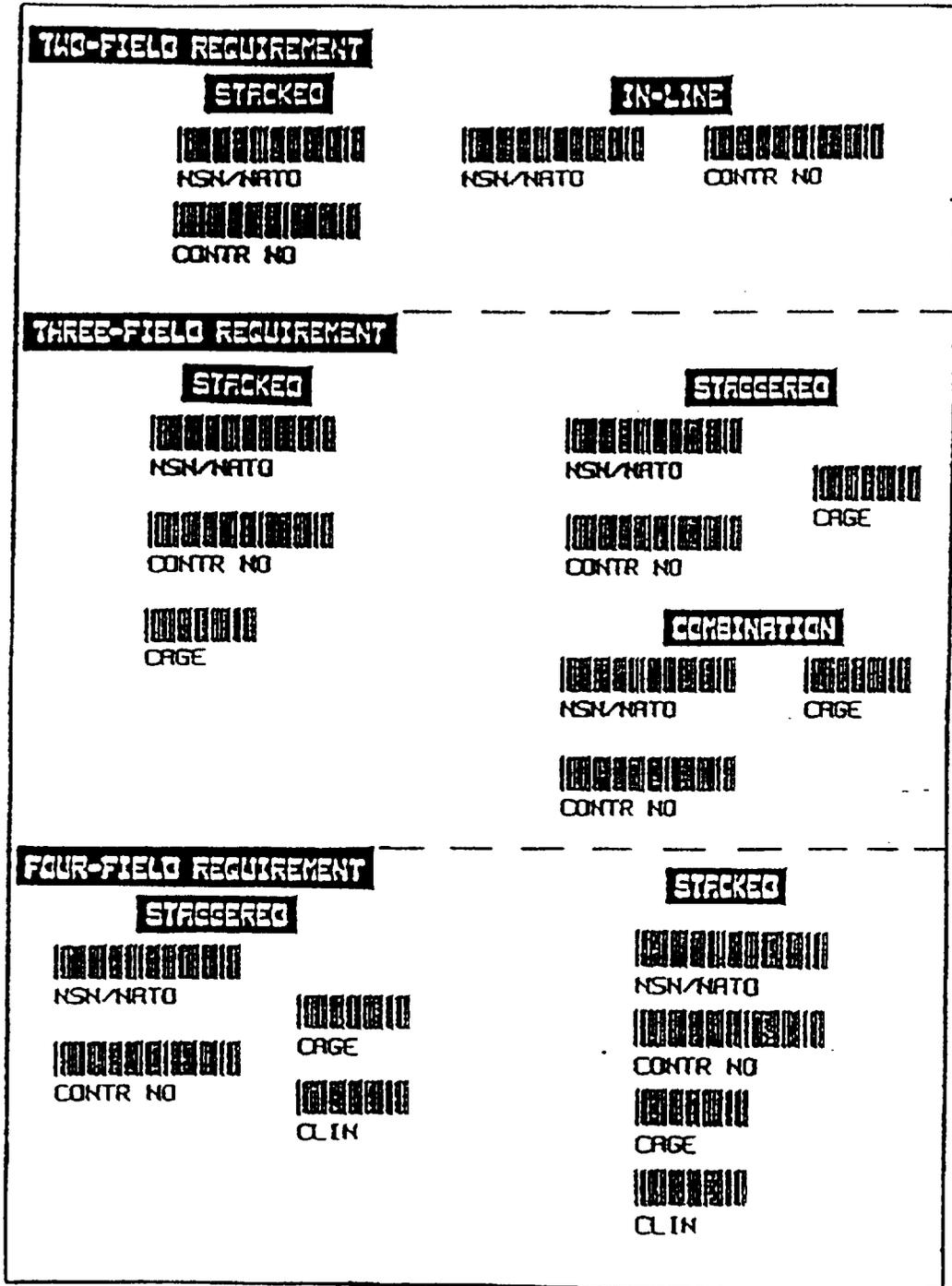


FIGURE 15. Typical bar code formats for use on exterior container surfaces and on tags.

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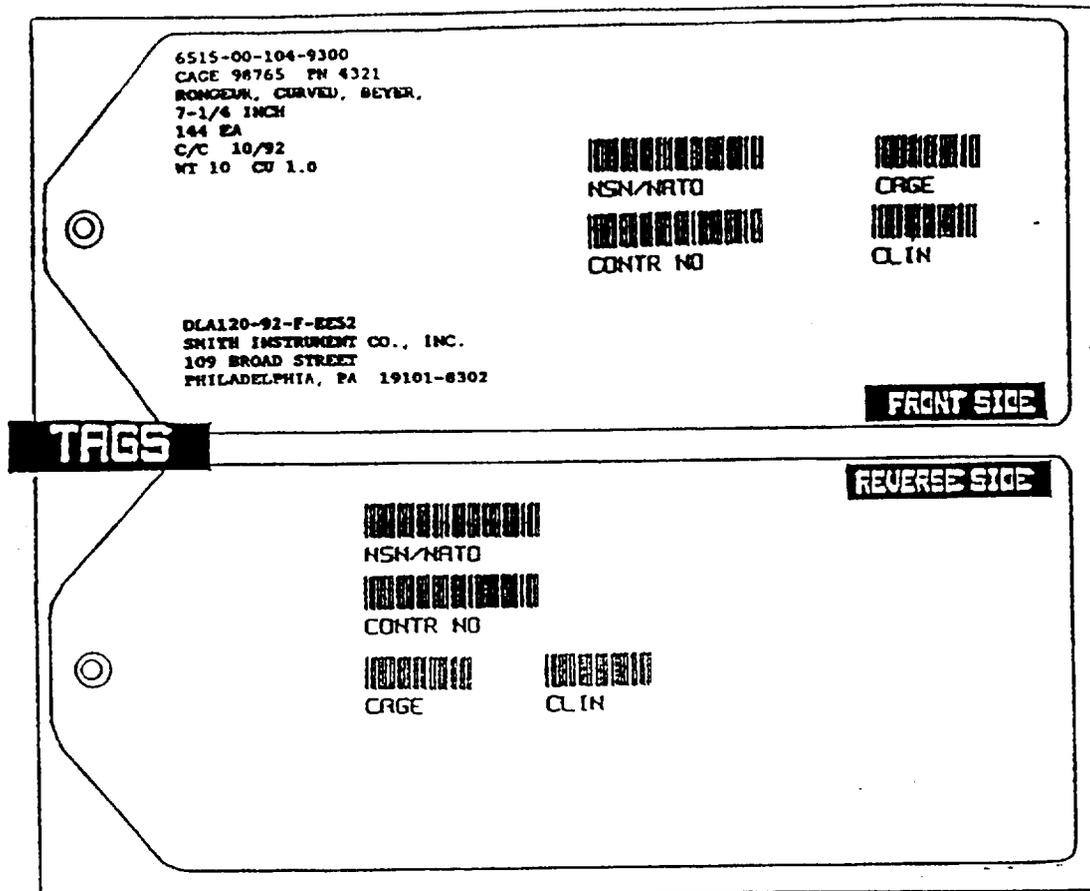


FIGURE 16. Examples of bar coded tags that may be attached to exterior shipping containers.

4.5.8.4 Cylindrical containers (see figure 17). Bar code markings shall be applied adjacent to the identification markings on the upper one-third of containers that are greater than 5 gallons. Bar code markings shall be applied immediately to the right of or below identification markings on containers 5 gallons or less and shall be a minimum of 1.0 inch (25.4mm) from the bottom and top edges of the container. Stacked formats shall be left-justified. On cylindrical containers that are less than 5 inches (127.0mm) in diameter, bar code labels or markings shall be applied so that the bar code symbol is vertical or in a "ladder" configuration. When the bar code is placed in this configuration, the bars must be placed 0.25 inch to 0.5 inch (6.35mm to 12.70mm) from the left edge of the identification markings. When identification and contract data markings are applied to the tops of empty or filled shipping containers, required bar code markings shall be applied below the identification and contract data markings. When marking reusable containers, all bar code markings that were applied for previous shipments or for storage shall be obliterated prior to the application of current bar code markings.

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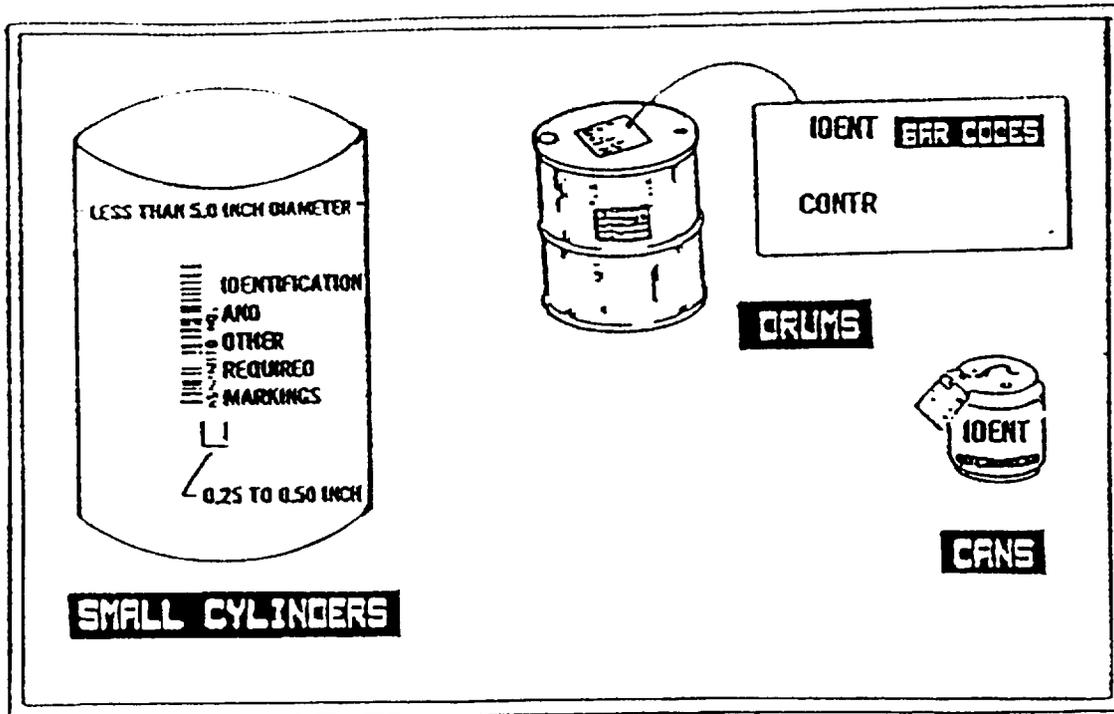


FIGURE 17. Bar code markings on cylindrical containers.

4.5.8.5 Multipacks. Multipacks shall be bar coded as follows:

- a. NSN/NATO stock number. None. NSNs of items that are in the containers comprising the multipack shall not be bar coded on the exterior of the multipack. However, the intermediate containers that comprise the multipack do require bar code markings as described in 4.5.7.
- b. Contract number. The contract number shall be bar coded on the exterior of the multipack if the number applies to all unit packs and intermediate containers inside the multipack. If mixed contract numbers are contained in the multipack, the exterior container shall not be bar coded.

4.5.8.6 Palletized unit loads (see figure 18). The bar code markings specified in 4.5.8.1 shall be applied to the outside of the load immediately to the right of or below the identification markings on a marking board/marketing panel (see 5.1.9), or they shall be applied directly on the identification-marked side of the load. In addition, regardless of the size of a palletized unit load of medical material, bar code markings shall also be applied to the side of the load that is to the left of the identification-marked side as shown in figure 18. If the individual containers that comprise the load are bar coded and scannable, no additional bar code markings are required.

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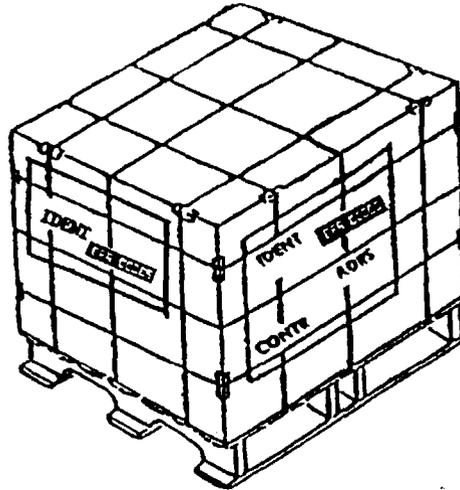


FIGURE 18. Bar code markings on palletized unit loads.

4.5.8.7 Materiel destined for resale. Unit packs and intermediate containers of materiel destined for resale that normally have a Universal Product Code (UPC) symbol need not be remarked with a 3-of-9 symbol.

4.5.8.8 Set, kit, and outfit (SKO). Bar code markings shall be applied to all SKOs, whether the SKOs were obtained through procurement or were assembled at a DOD activity. When a multiple container SKO is comprised of other SKOs, all containers shall be marked with bar codes that identify only the final (end item) SKO. When the SKO is obtained through procurement, the NSN and contract number of the complete SKO shall be bar coded. When an SKO is assembled at a DOD activity, only the NSN shall be bar coded.

4.5.8.9 Protected cargo (controlled, sensitive, classified, and pilferable items). Protected cargo that require the omission of specific item description markings from their outside shipping containers (see 4.2.5 and 4.2.5.1) shall contain the applicable bar code markings. For medical material, NSN bar code markings, including the HRI, shall be omitted.

4.6 Additional marking requirements for specific commodities.

4.6.1 Ammunition and explosives. Ammunition and explosives shall be marked as specified in MIL-STD-129-1.

4.6.2 Subsistence. Semiperishable and perishable subsistence shall be marked as specified in MIL-STD-129-3.

4.6.3 Shipments of medical material to North Atlantic Treaty Organization (NATO) countries. Shipments of medical material to NATO countries shall be marked as specified herein and in STANAG 2060.

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5. DETAILED REQUIREMENTS

5.1 Markings and marking materials.

5.1.1 Marking materials. The marking materials to be used shall be those materials specified herein or alternate choices approved by the cognizant activity.

5.1.1.1 Waterproofing materials used as protective coatings. Transparent, waterproofing materials such as spar varnish, acrylic coating compound, sealing compound, label adhesive, and pressure-sensitive tape shall be used as protective coatings on container markings.

5.1.1.2 Stencil-marking material. Any opaque, quick-drying, nonfading, weather resistant stencil ink shall be used for the purpose intended. If a waterproof stencil ink is used, a protective coating is not required. For information on the color of markings, see 5.1.7.

5.1.1.3 Obliterating lacquer, enamel, or paint. Any suitable enamel or paint that approximates the color of the container shall be used to obliterate markings. However, a quick-drying, opaque lacquer, ink, enamel, or paint approximating the color of the container may be used for obliterating markings when approved by the cognizant activity.

5.1.2 Labels, paper, pressure-sensitive, water-resistant. Paper labels shall be made of sized white paper stock having a smooth finish and a minimum basis weight of 20 pounds. Labels shall be of a water-resistant grade of paper, film, fabric, or plastic and shall be coated on the unprinted side with a water-insoluble, homogeneous, pressure-sensitive, permanent type adhesive. The adhesive shall adhere to metal, plastic, or fiberboard surfaces under high and low temperatures. Labels shall have a finish capable of withstanding normal handling during shipment and storage. In addition, labels shall be suitable for printing and writing on with ink without feathering or spreading. The applied label must remain securely in position under anticipated conditions of handling, shipment, and storage.

5.1.2.1 Protective coating of labels. If labels for exterior shipping containers are not inherently waterproof, they shall be waterproofed by coating the entire outer surface of the label with a transparent, waterproofing material (see 5.1.1.1). Labels on structural steel products and metal or plastic drums, pails, or cans that are used as exterior shipping containers shall also be waterproofed.

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5.1.3 Tags. Unless otherwise specified by the cognizant activity, paper shipping tags conforming to A-A-900 shall be used. A metal, cloth, plastic, or paper shipping tag such as UU-T-81, bearing the required markings, shall be used when specified herein or when it is impractical to stencil or apply a label on the container or unpacked item. Tags shall be attached to the container or item with a corrosion-resistant wire or twine. Tags shall not damage the item and shall be capable of withstanding repeated handling. Markings on cloth or paper tags shall be printed or typed with waterproof ink, while markings on metal tags shall be applied with dies or punches. Markings on plastic tags shall be applied by stenciling, stamping, machine printing (not hand printing), or, when specified, by other processes such as by applying decals or transfers. In addition to using twine or wire, tags may also be attached by other methods such as adhesion, sewing, clips, tacks, staples, tape, nails, or plastic cable ties.

5.1.4 Water-resistant envelopes. Water-resistant envelopes for packing lists and materiel release/receipt documents shall conform to PPP-E-540. A water-resistant, pressure-sensitive tape such as PPP-T-60 or PPP-T-76 shall be used to attach the envelope to the package or container.

5.1.5 Packing list protectors. Packing list protectors shall conform to A-A-1907.

5.1.6 Conditions of surfaces to be marked. All surfaces to be marked shall be clean, dry, and free of contaminants. All marks not applicable to the shipment shall be covered with a suitable obliterating lacquer, ink, enamel, or paint. Advertising matter and container markings which do not interfere with the clarity or positioning of the required markings on a container are permitted. If advertising matter prevents application of required markings, the manufacturer shall obliterate the advertisement or shall use a label large enough to accommodate the required markings. If the required markings cover part of the advertising, they must be a different color than the advertising matter. When shipping containers are consolidated into container vans for shipment to an ultimate consignee, obliteration of current address markings is not required by consolidating activities. When original unopened packs are readdressed for shipment by a DOD shipping element, contract data markings shall not be obliterated unless they interfere with other required markings.

5.1.7 Legibility, durability, and color of markings. Markings shall be clear, legible, durable, and nonfading. Unless otherwise specified by the cognizant activity, the color of all markings shall be black except when applied to a surface on which black is not legible. In this case, the marking color shall be one that provides a definite contrast with the surface being marked. For

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example, yellow or white lettering shall be applied over forest-green coloring. Prior approval is required from the procuring activity if any color other than black is used for markings.

5.1.8 Methods of marking unit packs, intermediate containers, exterior (shipping) containers, and palletized unit loads. Marking shall be by tagging, stenciling, stamping, machine printing, or by labeling (using preprinted labels). Other marking methods may also be used when approved by the cognizant activity. Hand printing is not acceptable on the unit pack. However, hand printing may be used on the intermediate container, exterior shipping container, and the palletized unit load only for the marking of serial numbers, piece number, total pieces, and gross weight and cube, provided all other requirements of this standard are met for legibility and marking materials. Hand printing must be clear and legible. Abbreviations such as "SER NO," "WT," and "CU" may also be hand printed.

5.1.8.1 Stenciling. Stenciling may be accomplished by rolling, brushing, or spraying with a suitable stencil ink.

5.1.8.2 Machine printing. The required markings may be machine printed directly on all unit packs, intermediate containers, and exterior containers at the time of manufacture.

5.1.8.3 Labels.

5.1.8.3.1 Use of labels. Unless otherwise specified in the procurement contract or order, bar code labels and address labels are required on all levels of military packaging. Labels may be used for supplying the required markings on all unit packs and intermediate containers, and, unless otherwise specified, they are also permitted on fiberboard, plastic, or metal exterior shipping containers. Without any special surface preparation, pressure-sensitive labels that meet the requirements of 5.1.2 may be used on containers other than wood. Pressure-sensitive labels are authorized on wood containers when the wood surface is properly prepared. When authorized by the procuring activity, paper labels (stenciled or nonstenciled) overcoated with label adhesive (see 5.1.2) may be used on wood containers for identification, contract data, and address markings only. When labels are used, required markings shall be machine printed, stamped, typed, or reproduced. Letters must not smear, fade, or blur under anticipated conditions of handling, shipping, and storing.

5.1.8.3.2 Affixing and securing paper labels. Paper labels that are other than pressure-sensitive shall be securely affixed with a suitable water-resistant label adhesive (see 5.1.2) that is applied on the complete underside of the label. As an alternate method, labels may be affixed and protected by placing a suitable

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transparent, waterproof, pressure-sensitive tape such as PPP-T-60 over the entire surface of the label.

5.1.8.3.3 Interior container markings. The size of a label shall not exceed the marking surface area of any side of a unit pack. When clear (untinted) plastic containers are used for unit protection, labels may be inserted or affixed inside the container if the label will not affect or be affected by the method of preservation and will not obscure more than 50 percent of the surface of the container. If the outer wrap of the unit pack is a transparent film wrap, markings shall be applied to the unit pack.

5.1.9 Marking board or marking panel. As specified herein or in the procurement contract or order, marking boards and marking panels shall be constructed of weather-resistant fiberboard, plywood, or wood-based panel (1/4-inch minimum thickness). For some unpacked items, the marking board/marketing panel may be constructed of minimum 1/4-inch plywood or 1/8-inch hardboard.

5.1.10 Size of markings. Unless otherwise specified herein, or by the cognizant activity, the lettering for all markings on all sizes of containers shall be in capital letters of equal height, shall be clearly legible, and shall be proportionate to the available marking space on the container. Lettering for the identification, contract data, and special markings shall be not less than one-fourth of an inch nor more than 1 inch in height. Unless otherwise specified in the contract or order or approved by the cognizant activity, each bar code marking shall be not less than one-fourth of an inch nor more than 1-1/4 inch in height. Unless otherwise specified in this standard, in the procurement document, or when specified by the cognizant activity, identification, contract data, and address markings on plastic, cloth, or paper tags or labels shall be not less than 0.095 inch (approximately three thirty-seconds of an inch). On metal tags, markings shall be not less than three-sixteenths of an inch in height.

5.2 Special markings. The special markings discussed in this standard are not all inclusive but are examples of the types of special markings that may be required on containers of medical material. Special markings such as "THIS SIDE UP," "FRAGILE," project codes (e.g., ARI or ABC), or arrows shall be specifically identified in the procurement document. Unless otherwise specified, special markings shall be placed in a conspicuous location on the identification-marked side of the container. If sufficient space is not available on the identification-marked side of the container, then the special markings shall be placed on the side of the container that is opposite the identification-marked side. Markings shall not be placed on the bottom of the container. Supply-type optional form (OF) labels are listed in table III at the end of this section.

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5.2.1 Shelf-life markings. Shelf-life markings for medical material shall be applied as specified herein and in DOD 4140.27-M. There are two types of shelf-life items. Type I items have a definite nonextendible period of shelf-life and are assigned alpha shelf-life codes (SLCs) (including "X"). Type II items have an assigned shelf-life time period that may be extended after completion of inspection, test, or restorative action. Type II items are assigned numeric SLCs and "X". Time periods and SLCs are in appendix A of DOD 4140.27-M and table IV herein. Supply condition codes which may apply to shelf-life items are in appendix B of DOD 4140.27-M and in table V. Items assigned an SLC of zero (non-deteriorative) do not require shelf-life markings. For contractor shipments, the instructions for marking shelf-life items may be obtained from the procuring activity. For Type I and Type II medical shelf-life items, the date of manufacture shall be shown for those items that do not have an expiration date. For Type I and Type II medical shelf-life items having an expiration date, the expiration date shall be shown in lieu of the manufactured date. For Type II medical shelf-life items, the inspection/test date shall be shown in addition to either the date of manufacture or expiration date. The words "Type I" or "Type II" shall not be applied as part of the shelf-life markings. Specific shelf-life markings applicable to medical material include the following.

5.2.1.1 Manufactured date. The manufactured date is the date the item was produced, fabricated, processed, or formed for use. For drugs, pharmaceuticals, chemicals, and biologicals, the manufactured date for products submitted to the Federal Food and Drug Administration for certification prior to release is the date of official certification notice. The manufactured date shall be preceded by "MFD" or "MFD DATE" and shall be the numeric month followed by the last two digits of the calendar year (i.e., MFD 10/92 or MFD DATE 10/92).

5.2.1.2 Expiration date. The expiration date is the date by which nonextendible items (Type I) should be discarded as being no longer suitable for issue or use. For drugs, pharmaceuticals, and biologicals, the expiration dating period shall be as stated in the procurement document. The expiration date shall be preceded by "EXP" or "EXP DATE" and shall be the numeric month followed by the last two digits of the calendar year (i.e., EXP 10/95 or EXP DATE 10/95).

5.2.1.3 Inspection or test date. The inspection/test date is the date by which extendible items (Type II) should be subjected to inspection, test, or restoration. The inspection/test date shall be left blank for drugs, pharmaceuticals, and biologicals. Examples of Type II shelf-life markings are:

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- a. For drugs, pharmaceuticals, and biologicals:

EXP DATE 10/95

INSP/TEST DATE _____

- b. For all other medical items:

MFD DATE 10/92

INSP/TEST DATE 10/94

5.2.2 Perishable medical material. Perishable medical material shall be marked as specified herein. In addition, the applicable label as specified in 5.2.2.1, 5.2.2.2, and 5.2.2.3 and "ARROW" and "FRAGILE" markings shall be applied to all exterior shipping containers of perishable medical material.

5.2.2.1 DD Form 1502 (Frozen Medical Material Shipment - Perishable - Keep Frozen) (see figure 19). Exterior shipping containers packed with perishable frozen medical material (constant temperature must be maintained below 32° F) shall have a completed "perishable - KEEP FROZEN" label applied to the address side of each container. Applicable icing and time data shall be inserted on the label at the time of shipment.

5.2.2.2 DD Form 1502-1 (Chilled Medical Material Shipment - Perishable Keep Chilled) (see figure 19). Exterior shipping containers packed with perishable refrigerated medical material (constant temperatures must be maintained between 35° F and 46° F) shall have a completed "PERISHABLE KEEP CHILLED" label applied to the address side of each container. Applicable icing and time data shall be inserted on the label at the time of shipment.

5.2.2.3 DD Form 1502-2 (Limited Unrefrigerated Medical Material Shipment - Perishable) (see figure 19). Exterior shipping containers packed with perishable limited unrefrigerated medical material (receipt of shipment by consignee is assured within a specified number of days) shall have a completed "PERISHABLE" label applied to the address side of each container. The date applicable to the time of removal from refrigeration shall be inserted on the label at the time of shipment.

5.2.2.4 Placement of medical material labels. When the lack of adequate space precludes the proper application of DD Forms 1502, 1502-1, or 1502-2 on the address side of the exterior shipping container, the appropriate label shall be applied to the opposite side. When the size of the container precludes application of the label to either side, the label may be applied in any fashion, provided it does not interfere with any required markings.

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5.2.2.5 Transportation special handling/protective services (see figure 19). Non-hazardous shipments of medical material moving by military controlled aircraft (including military contract airlift) that require special handling/protective services shall have a DD Form 1387-2 (Special Handling Data/Certification) label affixed to the exterior shipping container. The form shall be prepared as specified in DOD 4500.32-R for non-hazardous, classified/protected medical material and shall be placed on the same side of the container as the address marking. The shipper is responsible for completing a prescribed declaration form for every military air shipment containing dangerous goods, including medical material classified as hazardous. Instructions on how to properly complete this form are contained in AFR 71-4/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3. Instructions for contractor shipments may be obtained from the procuring activity.

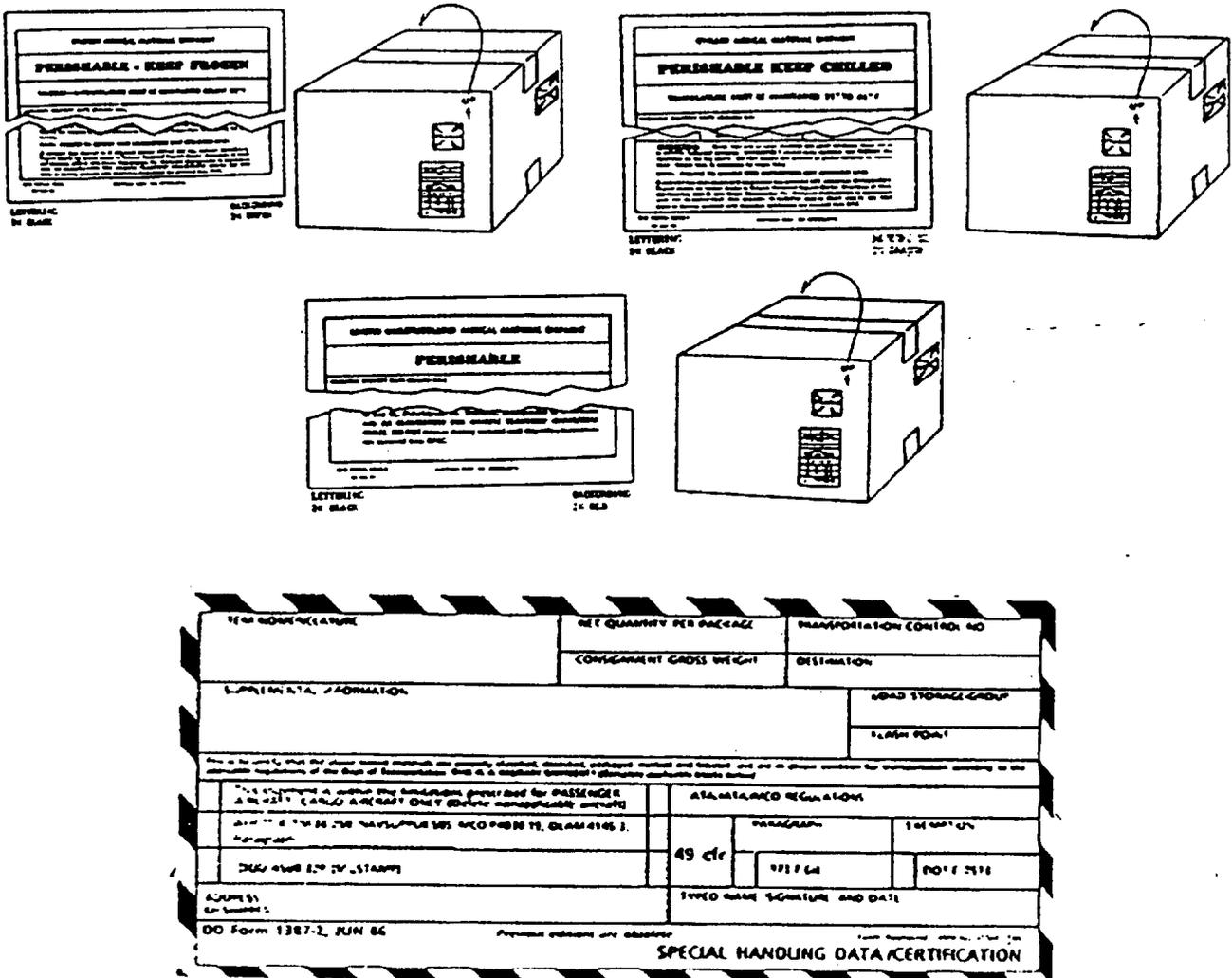


FIGURE 19. Medical material shipment labels.

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5.2.3 Warranty markings. Warranty markings are not required for medical items unless a contract specifically states that all containers are to be marked with a warranty legend. In this case, warranty markings shall indicate the time period or condition of the warranty (e.g., days/months, hours of operation, etc.). The warranty markings shall be applied by labeling, tagging, or printing and shall be prefaced by "WARRANTED ITEM." All warranted item information, including the words "WARRANTED ITEM," shall be in upper case letters of the same style font. These markings shall be located adjacent to or above the contract data markings. OF 274 may be used to mark warranted items. Examples of warranty markings are:

WARRANTED ITEM
WARRANTY EXPIRES
AFTER 1000 HOURS
OF OPERATION

WARRANTED ITEM
WARRANTY EXPIRES
1 JANUARY 1999

WARRANTED ITEM
WARRANTY GOOD FOR
180 DAYS FROM DATE
ITEM IS PUT INTO USE

5.3 Packing lists (see figure 20). When a packing list is required for a shipment of medical material, at least one copy of the packing list shall be placed inside the shipping container and one copy shall be sealed in a water-resistant envelope conforming to PPP-E-540, class 1, style 1, 2, 3, or 4. Class 1, style 1, 2, or 3 envelopes shall be secured to the exterior shipping container in the most protected location with PPP-T-60 tape. Class 1, style 4 envelopes, with a self-adhering, adhesive-coated backing, may be applied to containers other than wood. Tacks or staples shall be used to secure envelopes on wood containers. When they are used, the tacks or staples shall not be driven into the water-resistant envelope nor shall they penetrate the inside of the container. For registered parcel post, packing lists shall be attached as specified in 5.4.4. Unless otherwise specified, for overseas shipments except parcel post, the waterproof envelope containing the packing list shall be further protected with a packing list protector securely attached to the palletized/unitized load or container. An alternate method of applying packing lists to fiberboard boxes or to metal or plastic containers is by placing a glassine sheet of plastic over the folded packing list and applying pressure-sensitive tape such as PPP-T-60 or PPP-T-76 tape over the top. The tape shall extend half an inch from all edges of the packing list. The glassine plastic sheet shall have the words "PACKING LIST ENCLOSED" printed on the face. A DD Form 250 (Materiel Inspection and Receiving Report) should be used as a packing list for contractor shipments. On multiple container shipments, when either specified in the contract or when requested by the procuring activity, contractors shall place a packing list inside each container in addition to attaching a packing list to the outside of each container. A DD Form 1155 (Order for Supplies or Services/Request for Quotation) shall be attached

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to the commercial packing list that is used by vendors and shall be applied to exterior shipping containers, as applicable. When specified, as in Fast Pay Contracts, the case number and requisition number shall be included. For shipments generated by DOD activities, any locally prepared or procured packing list may be used. The contents of the listing shall be so organized that they can be readily understood and shall not include any information that has no bearing on the items or receiving activity. When an automated packing list (APL) is used, it shall contain the minimum data listed in DOD 4000.25-1-M.

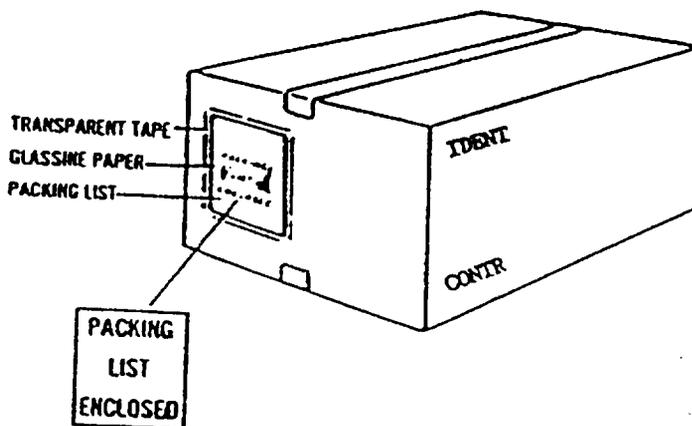


FIGURE 20. Packing list application.

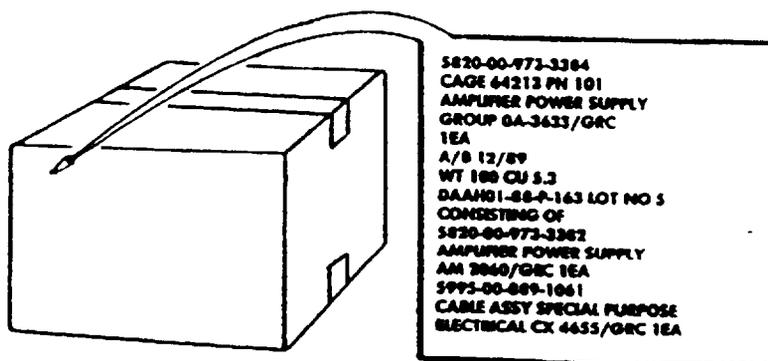


FIGURE 21. Single stock numbered item consisting of other stock numbered items in a single container.

5.3.1 Exceptions to the use of exterior packing lists. Exterior packing lists are required on all contractor and DOD shipments of medical material with the following exceptions:

- a. Like items or single-item packs (see figure 21). Except for materiel shipped for FMS, no exterior packing list is

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required for containers of like items or single-item packs when the contents are listed on a label that is attached to the boxes, lithographed or printed on the boxes, or when a manufacturer's part list is provided. For FMS shipments, exterior documentation is always required.

- b. Controlled, classified, and pilferable items (except for FMS shipments). For controlled, classified, or pilferable shipments, the packing list shall be placed inside the No. 1 container rather than on the outside. If a pilferable shipment is also an FMS shipment, the exception does not apply. A copy of the applicable documentation such as the DD Form 250, DD Form 1155, DD Form 1348-1 or DD Form 1348-1A must be placed on the exterior of all pilferable FMS shipments.

5.4 DD Form 1348-1, DD Form 1348-1A, and automated packing lists.

5.4.1 Single-line item shipment units (see figure 22). For single-line item shipments, one legible copy of the DD Form 1348-1 or DD Form 1348-1A shall be attached to the materiel in shipping container No. 1. In addition, at least one legible copy of the applicable form shall be enclosed in a water-resistant envelope conforming to PPP-E-540, class 4, style 1, 2, 3, or 4, and shall be attached to the outside of the shipping container. When the storage container is used as the shipping container, the copy normally placed inside the container shall be enclosed with the copy attached to container No. 1.

5.4.2 Multiple-line item shipment units (see figure 22). For multiple-line item shipments, one legible copy of the DD Form 1348-1 or DD Form 1348-1A shall be placed in a PPP-E-540, class 4, style 1, 2, 3, or 4, water-resistant envelope so that the NSN is visible. The envelope shall be attached by pressure-sensitive tape to the package applicable to each requisition. At least one legible copy of each applicable form shall also be placed in a PPP-E-540, class 4, style 1, 2, 3, or 4 water-resistant envelope and shall be attached to the exterior of each multipack container. When a polyethylene bag is used to group single items for packing, the bag shall contain a DD Form 1348-1 or DD Form 1348-1A folded so the identification and requisition information are visible. If an APL is produced in lieu of a regular packing list for either a single-line or multiple-line item shipment unit, the APL shall be attached to the shipping container in a water-resistant envelope and packing list protector. The words "MATERIAL RELEASE/RECEIPT DOCUMENTS" shall be marked on the outside of the protector. On wood containers, tacks or staples shall be used to secure packing list protectors (see 5.3). When requested by the consignee or at the discretion of the shipper, additional copies of the DD Form 1348-1 or DD Form 1348-1A may be provided for both single-line and

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multiple-line item shipment units. For FMS shipments, one copy of the DD Form 1348-1 or DD Form 1348-1A shall be furnished to the country's designated recipient for shipment status, and a second set of the DD Form 1348-1 or DD Form 1348-1A shall be distributed as specified in the DOD 4000.25-1-M.

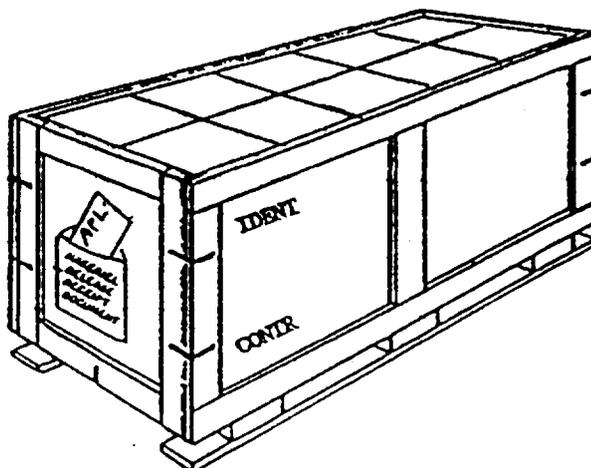


FIGURE 22. Placement of an APL in a packing list protector on an exterior shipping container.

5.4.3 Alternate method of attaching the documentation that accompanies shipments in fiberboard boxes. DD Forms 1348-1, DD Forms 1348-1A, and APLs may be attached to fiberboard boxes in the following manner. Prior to sealing the fiberboard box, place the appropriate papers in a water-resistant envelope. Then place the envelope under the flaps of the box so that the open end/flap of the envelope extends down the end of the box under the closure tape. Place the words "PAPERS HERE" on the tape in letters at least half an inch high directly over the envelope containing the papers. This is not authorized for FMS shipments, except for those sent by registered mail.

5.4.4 Alternate method of attaching the documentation that accompanies small parcel shipments. When the small parcel shrink-film system is used for multiple items, one copy of the DD Form 1348-1 or DD Form 1348-1A shall be attached to the materiel. For single items, two copies of the applicable form shall be placed under the shrink film in such a manner as to be read. This method is not authorized for FMS shipments.

5.4.5 Bar coded data requirements (see figures 23 and 24). The following bar code data, with human-readable interpretation (HRI) requirements, apply to those DOD sites having already implemented Logistics Application of Automated Marking and Reading Symbols applications utilizing DD Forms 1348-1 and 1348-1A.

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5.4.7 Computer-generated forms. The standard preprinted DD Form 1348-1 is 8 inches (203.2mm) wide (side line to side line) and 5 inches (127.0mm) high (top line to bottom line). Those sites having the means to generate the form as well as the data may generate a form whose size may vary in width from 8 inches to 9 inches (203.2mm to 228.6mm) and in height from 4 inches to 5.5 inches (101.6mm to 139.7mm). The tolerance for these dimensions is plus or minus 0.125 inch (3.18mm). The basic format shall remain the same and the in-the-clear/human-readable data must be easily read. Margins of 0.25 inch (6.35mm) and outside lines are necessary except for the bottom line which may be eliminated. The "form approved" information and DD form number shall remain. Block 27 shall contain all additional data and in-the-clear text that may be required and is not shown elsewhere on the form. The clear text may be in conjunction with bar coded information for those activities possessing bar code capability. The paper may be any color that provides a minimum bar code print contrast signal as specified in MIL-STD-1189.

5.5 Hazardous medical material. Hazardous medical material shall be marked and labeled as specified in this standard and in applicable domestic and international transportation regulations. Unless otherwise specified, UN-recommended performance-oriented packaging (POP) certification markings for hazardous materials (HAZMAT) prescribed herein shall be placed on the side of the exterior shipping container that is opposite the side containing the identification markings. For the marking of palletized loads of hazardous medical material, see 5.5.5.8.

5.5.1 Hazardous materials marking and labeling requirements. Depending upon the mode of transportation, HAZMAT shall be marked and labeled as specified herein and in accordance with Title 49 CFR, ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air, IATA Dangerous Goods Regulations, the IMO IMDG Code for water shipments, and AFR 71-4/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 for military air shipments, as applicable. Proper shipping names (PSNs), HAZMAT North American (NA) or United Nations (UN) identification numbers, HAZMAT classification warnings, and HAZMAT UN-recommended POP certification markings shall be placed on the exterior container, as required. Shipping containers identified for international transportation shall be marked, labeled, and documented to meet UN requirements in accordance with the appropriate modal regulation. Until 1 October 1993, domestic shipments not destined for export may be marked and labeled in accordance with the 1990 Title 49 CFR or the 1 October 1991 Title 49 CFR (to meet UN requirements). However, all marking, labeling, and documentation shall be consistent with the hazard classification and communication requirements set forth in the 1 October 1991 Title 49 CFR. Government-owned dangerous

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goods that were packaged prior to 1 January 1988 and are destined for international surface shipment or military air shipment may be marked in accordance with Title 49 CFR (dated prior to 1 October 1991). In this case, the shipping papers shall be annotated with the following clause: "Government-owned goods packaged prior to 1 January 1988." The HAZMAT classification warnings that are listed in table VI shall be applied, as required.

5.5.2 Proper shipping name and identification number (see figure 25). The PSN and NA or UN identification number shall be placed on the exterior shipping container (see 4.2.3g). PSNs and identification numbers are listed in Title 49 CFR, 172.101, latest revision, and in AFR 71-4/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3, chapter 4. NA numbers are not authorized for international shipments. The applicable international modal document should be used to determine the UN PSN and identification number for international shipments. When a multipack contains HAZMAT, the PSNs and identification numbers shall be marked on each applicable container in the multipack. These PSNs and identification numbers shall also be listed on the identification-marked side of the multipack. Applicable HAZMAT classification warning labels for each class of material contained in the multipack shall also be applied to the outside surface.

5.5.3 Marking and labeling of air and water shipments. Marking and labeling requirements for shipments of HAZMAT by commercial air are specified in Title 49 CFR and in the ICAO technical instructions. Although most DOT labels are compatible with IATA and ICAO requirements, the applicable regulations should also be consulted. When shipment is by military airlift or contract carrier, the requirements of AFR 71-4/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 shall apply. In addition, for all air shipments, the outer container of combination packages, having inner receptacles that contain a liquid HAZMAT must be marked "AIR ELIGIBLE" to verify that either the inner container(s) or the outer container meet the internal pressure requirements for air eligibility. This required marking is in addition to any applicable UN-recommended packaging certification markings. The size of the marking shall be proportionate with the size of the container. When known, the tested kilopascals (kPa) may be marked below the "Air Eligible" wording. A kPa is the international unit of measure for internal pressure. The formula for converting to kilopascals is "psi X 6.89 = kPa." The words "AIR ELIGIBLE" are not required for single containers of HAZMAT because the kPa is already built into the UN certification code. The marking and labeling requirements for the shipment of HAZMAT materials by vessel are specified in Title 49 CFR and in the IMO IMDG Code. The IMO IMDG Code is used for overseas shipments by vessel.

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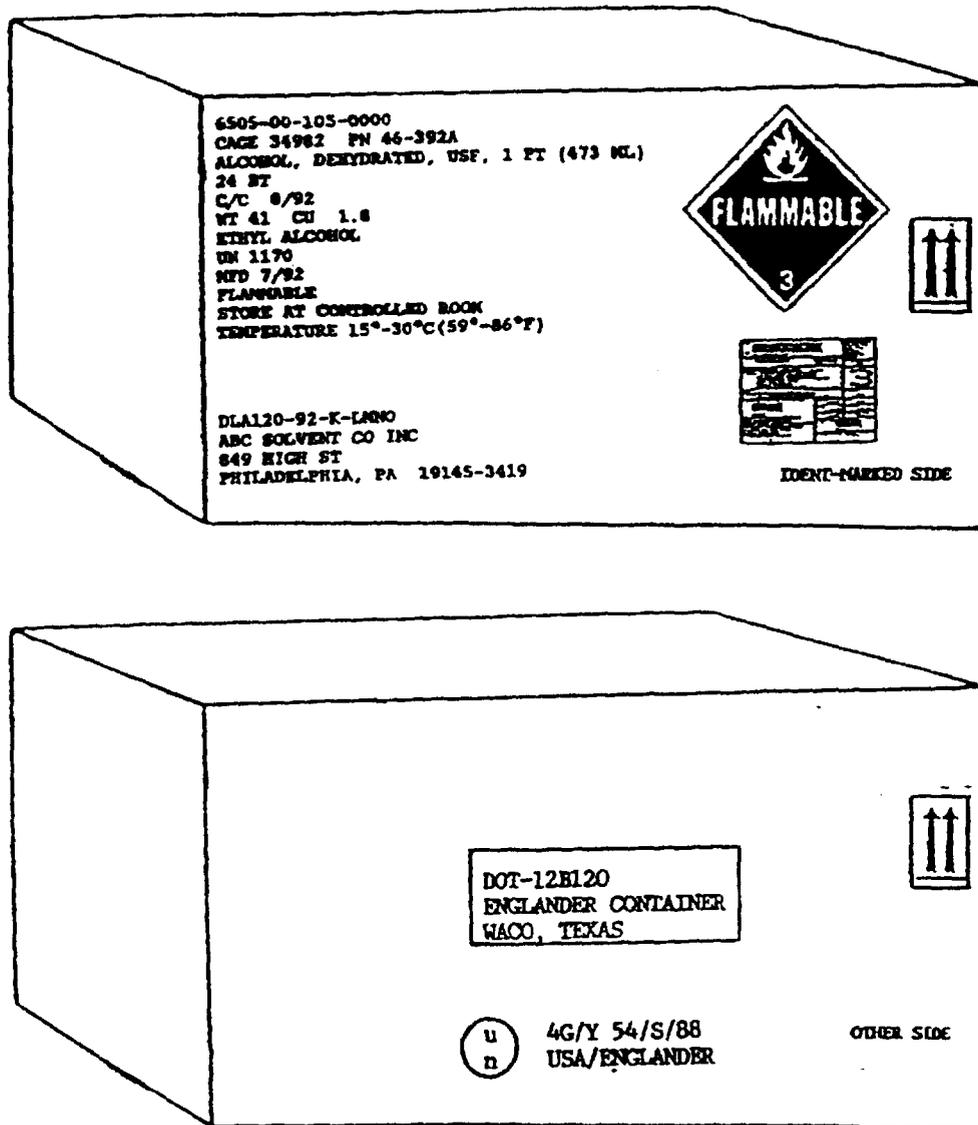


FIGURE 25. An example of exterior container HAZMAT marking and labeling requirements, including POP markings.

5.5.4 Precautionary marking and labeling by other statutes or regulations. Markings required for any purpose by regulations or statutes such as Title 29 CFR or Title 40 CFR and regulations issued under their authority shall neither obscure nor be obscured by other markings. Also, HAZMAT offered for shipment via the United States Postal Service (USPS) shall be marked and labeled in accordance with the USPS Publication No. 52.

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5.5.5 Identifying containers and packagings (see figure 25). Containers or configurations (packagings) shall be identified as complying with applicable DOT regulations, Federal or military specifications, and UN recommendations by one or more of the following options. When a container or packaging meets a DOT specification and has also passed the applicable UN-recommended performance tests, the container (packaging) shall be marked with both the DOT container specification marking and the UN packaging certification marking. When a container that is manufactured to a Government drawing, packaging drawing, or specification has successfully passed all applicable UN-recommended performance tests, then both the UN packaging certification marking and the applicable drawing or container specification marking shall be applied. For use of the lower case "un" symbol, see 5.5.5.2.1.

5.5.5.1 DOT specifications. When the container complies with a DOT specification, the container must be marked as required by the applicable specification (see Title 49 CFR). This is normally the responsibility of the container manufacturer.

5.5.5.2 UN-recommended POP certification markings (see figures 25 and 26). When the container complies with the UN requirements, it shall be marked in accordance with ICAO technical instructions, IATA, IMO IMDG Code, and Title 49 CFR. Figure 26 shows an example of UN-recommended POP certification markings for a successfully tested combination package using a fiberboard box. Unless otherwise specified by the cognizant activity, these POP certification markings shall be placed on the opposite side of the shipping container from the side containing the identification markings. POP certification markings shall not be placed on the bottom of the container.

5.5.5.2.1 UN symbol and size of lettering (see figures 25 and 26). The symbol "un" (lower case) shall be encircled, with the circle being sufficiently large enough to provide a minimum clear spacing around the "un" symbol. For embossed metal packagings, the capital letters UN may be applied as the symbol. The UN logo and the other codes shall be in letters that are proportionate with the overall size of the container but shall be not less than 1/4-inch in height. Methods of marking shall be as specified in 5.1.8 and shall not interfere with or cause confusion with those markings which identify the contents or their hazardous nature. If the party responsible for ensuring that the UN recommendations have been met has a certification symbol, then the certification symbol must be registered with the U.S. Department of Transportation, Associate Administrator for Hazardous Materials Safety. When the contractor packing the shipment does not have a DOT-registered symbol, then the name and address of the responsible party must be clearly marked on the container in lieu of a

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certification symbol. The symbol "DOD" has been assigned to the U.S. Department of Defense and is so registered. It is only authorized for use by DOD activities as identified in DLAR 4145.41/AR 700-143/AFR 71-5/NAVSUPINST 4030.55/MCO 4030.40.

	<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; flex-direction: column; align-items: center; justify-content: center;"> u n </div>	<p>4G/X6/S/92 USA/***</p>
where		
<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; flex-direction: column; align-items: center; justify-content: center;"> u n </div>		is the symbol used to CERTIFY that packaging complies with UN recommendations for the item and packaging.
4G		is the UN recognized symbol for a fiberboard box which has been successfully tested to UN recommended drop, stack, and water absorptive performance criteria.
X		is a letter designating the packing group for which the fiberboard box configuration has been successfully tested. X is used for Packing Group I. Y is used for Packing Group II. Z is used for Packing Group III. Items of a lesser packing group may be packaged in a box, marked, and tested to a higher packing group provided the tested weight is not exceeded.
6		is the maximum authorized gross weight, expressed in kilograms, for which the packaging has been tested.
S		indicates packaging inner contents are either solids or other inner containers (e.g., cans or bottles).
92		is the last two digits of the year during which the box was manufactured.
USA		is State (country) authorizing allocation of the mark.
***		is the symbol of the party that is responsible for ensuring that the UN recommendations have been met. The appropriate symbol shall be the contractor's authorized symbol or as stated in the contract, order, purchase agreement, specification, special packaging instruction, or other written direction by the packaging design agency or by higher headquarters.

FIGURE 26. Example of UN packaging certification markings (for a fiberboard box).

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5.5.5.2.2 Contractor's responsibilities. Unless otherwise stated in the procurement contract, contractors must certify the packagings themselves as meeting the UN performance requirements or must have the packagings certified by a DOT-approved testing facility. The contractor is also responsible for determining the use of the registered symbol of the contractor, packaging manufacturer, or the DOT-approved testing facility as part of the UN packaging certification markings. The contractor's certification symbol requirements shall be as specified in 5.5.5.2.1 herein.

5.5.5.3 Containers manufactured to a Government drawing, packaging drawing, or specification. When a container is manufactured to a Government-approved drawing or specification, it shall be identified as such. This requirement is satisfied, for example, when a container has a MIL-STD-130 or equivalent name-plate or when it has the fiberboard box maker's certificate and statement of conformance to a Federal specification. This is normally the responsibility of the container manufacturer. When the complete package, including cushioning and blocking materials, inner container(s), and the shipping container, is covered by a detailed procedure in a specification or packaging drawing (shipping container drawing), the applicable specification or drawing shall be marked on the container in an inconspicuous location, such as on the bottom. This additional marking need not be applied to containers with name-plates when the contents are specific to the container (e.g., an MK 46 Torpedo in an MK 535 container) or to packages when the entire packaged configuration is described by the NSN which is also part of the identification markings. These type containers may be used to ship HAZMAT domestically and internationally when the packaging has successfully passed all applicable UN-recommended performance tests or is covered by a Competent Authority Approval (CAA) and is so marked.

5.5.5.4 DOT exemptions. When a DOT exemption governs, the DOT exemption number (e.g., DOT E-7605) shall be placed near the PSN and any other required cautionary markings. Verification of an exemption and its requirements can be determined by writing to the Military Traffic Management Command (MTMC), 5611 Columbia Pike, Falls Church, VA 22041-5050, or by calling (202) 756-1951. DOT exemptions shall not apply to international shipments unless the HAZMAT is exempted from POP marking requirements.

5.5.5.4.1 DD Form 1387-2 used with DOT exemption 7573 or 9232. All shipments of biologicals, classified/protected materiel, and other materiel requiring special handling that are transported by military controlled aircraft or contract air carrier that operate in accordance with DOT exemptions 7573 or 9232 shall be labeled with a DD Form 1387-2. For information on the completion of this form, see 5.2.2.5 and figure 19.

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5.5.5.5 Certification of Equivalency (COE). When a COE has been issued pursuant to AFMC 800-29/AMC-R 700-103/NAVSUP INST 4030.50/MCO 4030.39/DLAR 4145.37, the container certification number (e.g., CCN AF-81-04) shall be applied near the PSN and near any other required cautionary markings. When specified by a joint regulation, this marking may be omitted. COEs shall not apply to international shipments unless the HAZMAT is exempted from POP marking requirements.

5.5.5.6 Competent Authority Approval. The competent authority, which is DOT, may provide an exemption CAA to international and domestic performance requirements. All requests for CAAs shall be documented as specified in Title 49 CFR and shall be submitted to the applicable service HAZMAT focal point. The service HAZMAT focal point shall ensure completion of the request for the CAA and shall submit the CAA request to the MTMC to be forwarded to DOT. The approved CAA number must appear on the shipping paper, in conjunction with the item description, with a copy of the CAA attached to the shipping paper.

5.5.5.7 Overpack/multipack containers. When the authorized packaging configuration has successfully passed the UN-recommended performance tests and the packaging is marked with the applicable UN packaging specification markings, and when military requirements specify overpacking of the packaging configuration in an outer container (placing a fiberboard box in a wood box), then the testing and subsequent marking of the outer container is unnecessary. In addition to the requirements specified in 5.5.2, conformance with UN recommendations shall be shown by marking the outer container with the following words: "INNER PACKAGES COMPLY WITH PRESCRIBED SPECIFICATIONS." This marking, however, is not sufficient for combination packages consisting of overpacked inner packagings which contain liquids and which are transported by aircraft. For all air shipments containing HAZMAT liquids, the outer container shall be marked with the words "AIR ELIGIBLE" to indicate that either the inner receptacles or the outer container meet the internal pressure requirements for air eligibility. Multipack containers comprised of performance-tested packagings shall also be marked with this information to certify conformance with the UN recommendations. When two or more packages of compatible HAZMAT are placed within the same outside container or overpack, the outside container or overpack shall be labeled as required for each class of HAZMAT contained therein.

5.5.5.8 Palletized unit loads of hazardous materials. For pre-existing palletized unit loads of HAZMAT that are in the DOD stockpile and are identified as having passed the POP testing requirements, the POP certification marking may be applied to two placards that shall be placed on two opposite sides of the pallet

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load in lieu of marking each container. This rule also applies to material having different DOT and UN PSNs. The markings shall be applied as specified in 4.2.4. Newly constructed palletized loads shall be marked as specified herein and in the applicable modal regulation. If the load contains POP-certified containers and POP certification markings are not visible on any of the containers that comprise the load, then the statement "INNER PACKAGES COMPLY WITH PRESCRIBED SPECIFICATIONS" shall be placed on the marking board or marking panel.

5.5.6 Documentation for hazardous materials. The shipper is responsible for the completion of a prescribed declaration form for each and every military air shipment containing dangerous goods, including hazardous materials. See AFR 71-4/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 for instructions on how to properly complete the form.

5.5.7 Flash point markings (see figure 27). All unit packs, intermediate containers, and exterior shipping containers packed with flammable liquids (flash point of not more than 141 degrees Fahrenheit (F) or 60.5 degrees Celsius (C)) shall be marked with the flash point of the material. For other than limited quantities, all shipment of flammable liquids shall have the UN Class 3 label placed on the identification-marked side of the shipping container. International shipments must contain the UN Class 3 label. The flash point shall be preceded by the words "FLASH POINT" and shall be followed by the letter "F" or "C," as appropriate. The flash point markings may be shown in degrees F, C, or in both degrees F and C and shall be applied in a conspicuous location on the identification-marked side of the container. If space is not available on the identification-marked side, then the required HAZMAT label(s) and the flash point marking may be placed on the opposite side. The size of the lettering shall be proportionate to the available marking space. The flash point shall be determined by using testing methods prescribed in Title 49 CFR.

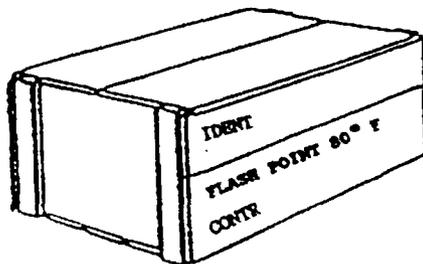


FIGURE 27. Flash point markings.

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5.5.8 Cytotoxic (antineoplastic) drugs (see figure 28). Cytotoxic (antineoplastic) drugs shall be marked as specified herein. In addition, each intermediate package and exterior (shipping) container that contains cytotoxic (antineoplastic) drugs shall be marked with a diamond-shaped figure with the word "CYTOTOXIC" printed inside the figure in black letters on a white background. Size of the markings shall be as specified in 5.1.10. The marking shall be stenciled, machine printed, or labeled on the outside surface of the container adjacent to the item description or PSN. If a label is used for this marking, it shall be locally produced or procured and shall meet the requirements specified herein and shown in figure 28.

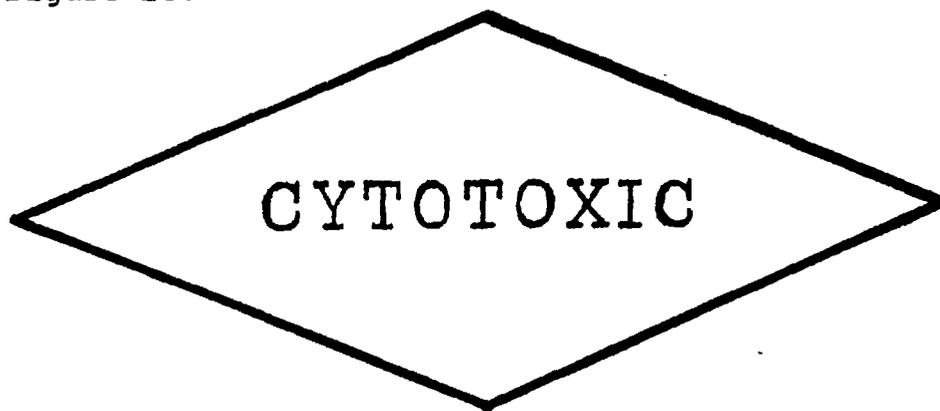
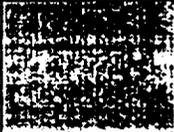


FIGURE 28. Cytotoxic marking.

5.5.9 Kits containing hazardous materials. Kits containing hazardous components in small quantities such as adhesives, inks, solvents, paints, and other flammable liquids shall be marked and labeled in accordance with the requirements specified in this standard. When more than one component is classified as a HAZMAT, the container shall be marked and labeled in accordance with 5.5.2. The UN packaging certification markings are only necessary when the quantity of the HAZMAT in the individual kit or shipping configuration of two or more kits exceeds the quantity designated as exempted in the applicable modal regulation(s).

5.5.10 Hazardous chemical warning label (see figure 29). All unit packs or unit containers of hazardous chemicals (including aerosols) shall have a completed DD Form 2521 (Hazardous Chemical Warning Label) affixed to them in accordance with DOD 6050.5H. If a container includes more than one unit pack, such as a container of six aerosol cans that have a unit of issue of "one each," then the DD Form 2521 shall not be applied to the individual unit packs (each aerosol can) that comprise the container until the container itself is opened. DOD installations are not required to relabel hazardous chemicals received from commercial suppliers with the DD Form 2521 label when those materials are already labeled by the supplier in accordance with the Hazard Communications Standard.

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HAZARDOUS CHEMICAL WARNING LABEL							
1. CHEMICAL / COMMON NAME 9637, Alkanox				2. HAZARD CODE			
3. NSN / LSN 5970-00-161-7232		4. PART NUMBER 9637 Alkanox					
5. ITEM NAME Insulating Varnish							
6. HAZARDS (X all that apply)	(1) Acute (Immediate)				(2) Chronic (Delayed)		
	NONE	SLIGHT	MODERATE	SEVERE			
a. HEALTH 			X		X		
b. CONTACT 				X			
c. FIRE 				X			
d. REACTIVITY 		X					
7. SPECIFIC HAZARDS AND PRECAUTIONS (Including Target Organ Effects)							
<p>WARNING!</p> <p>Acute: Irritation of skin, eyes, mucous membranes. Drying, defatting of skin. Ingestion may cause severe damage to gastrointestinal tract. Avoid breathing vapors. Keep away from heat, sparks, and flame.</p> <p>Chronic: Contains a suspected mutagen. Contains a suspected teratogen. Blood and reproductive disorders may occur; eye, liver, kidney, and central nervous system damage may occur.</p> <p style="text-align: center;">(See MSDS for further information)</p>							
8. PROTECT (X all that apply)		X	a. EYES	X	b. SKIN	X	c. RESPIRATORY
9. CONTACT a. COMPANY NAME NJC Chemical Company							
b. ADDRESS (Street, P.O. Box, City, State, Zip Code, and Country) 10 Elm Street, Anytown, NY 55515							
c. EMERGENCY TELEPHONE NUMBER (Include Area Code) (555) 810-1010							
10. PROCUREMENT YEAR FOR HAZARDOUS CHEMICAL							

DD Form 2521, DEC 88

FIGURE 29. DD Form 2521 (Hazardous Chemical Warning Label).

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TABLE III. Supply-type labels

NOTE: Use existing supplies of OF's 87, 87A, and 88 until they are exhausted or until 31 December 1993, whichever comes first. OF numbers and NSNs for the new Electrostatic Discharge (ESD) Sensitive Devices labels will be requested upon implementation of MIL-STD-129M. At that time OF's 87, 87A, and 88 will be canceled.

<u>Optional Form</u>	<u>Title</u>	<u>Size (in inches)</u>	<u>NSN</u>
70A	Fragile (gummed)	2 1/2 by 2 1/2	7540-00-559-2335
71A	Fragile (gummed)	4 by 4	7540-00-559-2337
73	Method II Package	2 1/2 by 1	7540-00-139-4738
74	Method II Package	6 by 2 1/2	7540-00-139-4752
80	999	2 by 2	7540-00-139-4831
81	999	4 by 4	7540-00-139-4832
83	NMCS	3 by 1 1/2	7540-00-139-4834
84	NMCS	3 by 5	7540-00-139-4835
87	Caution-Sensitive Electronic Devices	2 by 2	7540-01-109-8815
87A	Caution-Sensitive Electronic Devices	4 by 4	7540-01-110-4906
88	Caution-Sensitive Electronic Devices	2 by 5/8	7540-01-317-7371
274	Equipment Warranty	3 by 2	7540-01-044-7185

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TABLE IV. Shelf-life codes

NOTE: Tables IV and V are for information only and shall not be quoted as official SLC requirements. The official tables are contained in DOD 4140.27-M.

Shelf-Life Period	Type I	Type II	Required Number of Months Shelf-Life Remaining Upon Receipt by the Government
Nondeteriorative	O	O	N/A
1 Month	A	N/A	1
2 Months	B	N/A	2
3 Months	C	1	3
4 Months	D	N/A	3
5 Months	E	N/A	4
6 Months	F	2	5
9 Months	G	3	8
12 Months	H	4	10
15 Months	J	N/A	13
18 Months	K	5	15
21 Months	L	N/A	18
24 Months	M	6	21
27 Months	N	N/A	23
30 Months	P	N/A	26
36 Months	Q	7	31
48 Months	R	8	41
60 Months	S	9	51*
Medical items, parachutes, and Individual Repair Parts Ordering Data (IRPOD) items with a shelf-life period of greater than 60 months.	X	X	Variable based on the shelf-life months*

*No more than 12 months expended for elastomeric items of supply.

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TABLE V. Application of supply condition codes to shelf-life items

<u>CODE</u>	<u>TITLE</u>	<u>DEFINITION</u>
A	SERVICEABLE (ISSUABLE WITHOUT QUALIFICATION)	Shelf-life remaining is more than 6 months.
B	SERVICEABLE (ISSUABLE WITH QUALIFICATION)	Shelf-life remaining is from 3 to 6 months.
C	SERVICEABLE (CUSTOMER CONCURRENCE REQUIRED PRIOR TO ISSUE)	Shelf-life remaining is less than 3 months.
E	UNSERVICEABLE (LIMITED RESTORATION)	Materiel which involves only limited expense or effort to restore to serviceable condition and which is accomplished in the SA where the stock is located.
G	UNSERVICEABLE (INCOMPLETE)	Materiel requiring additional parts of components to complete the end item prior to issue.
H	UNSERVICEABLE (CONDEMNED)	Type I shelf-life materiel that has passed the expiration date and Type II shelf-life materiel that has passed its inspection or test date and cannot be extended.
J	SUSPENDED (IN STOCK)	Type II shelf-life materiel that has reached the inspection or test date and is awaiting inspection, test, or restoration.
K	SUSPENDED (RETURNS)	Materiel returned from customers or users and awaiting condition classification.

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TABLE V. Application of supply condition codes to shelf-life items - Continued.

<u>CODE</u>	<u>TITLE</u>	<u>DEFINITION</u>
L	SUSPENDED (LITIGATION)	Materiel held pending litigation or negotiation with contractors or common carriers.
R	SUSPENDED (RECLAIMED ITEMS, AWAITING CONDITION DETERMINATION)	Assets turned in by reclamation activities which do not have the capability (e.g., skills, manpower, or test equipment) to determine the materiel condition. The actual condition will be determined prior to induction into maintenance activities for repair/modification.

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TABLE VI. Hazardous materials classification warnings

NOTE: Except for Standard Form (SF) 420A, hazardous warning labels listed below are no longer available from GSA and must be locally procured. SF 420A has not been canceled and is still available from GSA. For import and export shipments, use Class 6 (Poison B) label.

<u>United Nations Class</u>	<u>Title (DOT Classifications)</u>	<u>United Nations Class</u>	<u>Title (DOT Classifications)</u>
1	Explosive A	7	Radioactive I (material)
1	Explosive B	7	Radioactive II (material)
1	Explosive C	7	Radioactive III (material)
2	Nonflammable Gas	7	Radioactive III (material)
2	Flammable Gas	8	Corrosive (material)
3	Flammable Liquid	-	Empty
4	Flammable Solid	4	Spontaneously Combustible (material)
5	Oxidizer	4	Dangerous When Wet (Water Reactive Material)
5	Organic Peroxide	-	SF 420A (see note) Etiologic Agents Biomedical Medical for Domestic Shipments
2 or 6	Poison Gas (Poison A)	-	Cargo Aircraft Only
6	Poison (Poison B)		
6	Irritant (Irritating material)		
6	Irritant (w/skull) (Import and Export)		

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6. NOTES

THIS SECTION IS NOT APPLICABLE TO THIS STANDARD.

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