

LABELING OF METAL CANS FOR SUBSISTENCE ITEMS

Labeling of Metal Cans. This DLA TROOP SUPPORT FORM covers the labeling of metal cans for subsistence items used by the Department of Defense.

Reference Documents:

Non-Governmental Standards:

ANSI/ASQC Z1.4-Sampling Procedures and Tables for Inspection by Attributes.

(Copies are available from American Society for Quality Control, 611 East Wisconsin Avenue, Milwaukee, Wisconsin 53202.)

Federal Specifications:

Federal Food, Drug, and Cosmetic Act and Regulations promulgated thereunder, U.S. Department of Health and Human Services (HHS)

Meat and Poultry Inspection Regulations, U.S. Department of Agriculture (USDA)

(Copies are available from the Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954. 20402-0001.)

General Requirements:

Techniques of labeling. Unless otherwise specified herein, techniques of labeling shall refer to the usual commercial practices.

Stamping. Stamping as hereinafter referenced shall indicate any process of applying marking ink to cans other than lithography or non-contact printing. The item nomenclature Stampings on cans shall not exceed the use of 14 capital letters per line of Stampings.

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Examples of Abbreviated Products:

Item	Nomenclature stamping
Apricots, freeze dehydrated	APRICOTS FRZ DHY
Beans, with pork, tomato sauce	PK AND BNS TOM
Spinach	SPINACH
Jam, peach	PEACH JAM
Tea, instant	TEA INST
Sardines, vegetable oil	SARD/VEG OIL
Maple syrup, imitation	MAPLE SYRUP IMIT

Embossing or impressing. Embossing or impressing shall be carefully controlled to result in legible markings without impairing the cans. The raised portions of embossed characters shall have no sharp edges.

Non-contact printing. The use of ink-jet imprinting for date, lot code, and nomenclature marking is acceptable on the lid and/ or side of the can. Markings shall be permanent, contrasting, and meet the *Marking fastness requirements* paragraph specified herein.

Type. Lithography and stamping shall be in bold Gothic capital letters; no letter shall be less than 8 point in size. All characters shall be sharply outlined and legible. For cans with exterior coating the ink shall be black. When the lithography or stamping method is used for marking of uncoated cans (without exterior can coating), the ink used may be any color which reflects a definite contrast and conforms to all *General Requirements* specified herein.

Corrosion. Adhesive, pickup gums, marking inks, and label stocks shall not contain any ingredients that accelerate or increase corrosion of the can. When specified in the contract, a Certificate of Compliance that indicates that all production materials have been previously used without complaint by the Military agencies will be accepted as complying with the requirements.

Volatile and carcinogenic materials. Materials applied to the can or cover shall be free of carcinogenic or volatile elements and shall impart no odor, taste, or migrate into or affect the contents of the can.

Other marking information. With exceptions noted in paragraph *Cans processed subsequent to award of contract and Table I* specified herein, cans may have state or locally required information, or the canners identification embossed, impressed, or stamped on the end.

General labeling requirements. Unless otherwise specified, the labeling of all canned subsistence items shall conform in detail to the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

Labeling of cans for overseas shipment. Labeling of cans for overseas shipment shall be in accordance with Method 1 or Method 2 and the *Acquisition Requirements* paragraph specified herein.

METHOD 1.

Cans supplied from stocks existing on date of award of contract. When cans are supplied from stocks existing on date of award of contract, the name of the product or the abbreviation thereof (*see Stamping* paragraph specified herein) shall be stamped on the body or one end of the can. However, cans that are coated after award of contract shall be stamped after coating. If the cans have the name of the product or abbreviation in accordance with the *Stamping* paragraph, and are embossed or impressed in the end of the can, no further labeling is necessary.

Cans processed subsequent to award of contract. When cans are processed subsequent to the award of the contract, the label information specified in one of the applicable paragraph herein shall be shown in accordance with Table I on the body or one end of the can. The applicable paragraphs are: *Canned meats and canned meat products, Canned poultry and canned poultry products, All other canned subsistence items, or Seasonal packs of canned fruit and vegetable items.* If a standard of identity exist for the product, the ingredient statement may be omitted.

TABLE I. Method 1 marking

Category of	Product (Canned)	Acceptable Marking
Meats, meat	products, poultry and	Lithographing,
	Poultry products	stamping 2/
	Citrus and pineapple fruits and juices, Pickles, and relishes, mustard, salad Dressing, sour cherries, and cranberries	Lithographing, stamping 1/
	Baked products	Lithographing, Stamping 1/
	Others	Lithographing Stamping 1/

1/ The legend, date, and any special identification of lots the packer may wish to use, or other information required by state or local laws, may be embossed, impressed, or stamped on the body or on one end of the can provided the cans are carefully embossed or impressed.

2/ Stamping is not acceptable for canned meats, meat products, poultry, and poultry products, except date of pack (day, month, year) and net weight may be stamped on cans which are packed on a catch weight basis.

Canned meats and canned meat products. In addition to any special requirements contained in the commodity specifications and herein, the labeling of canned meats and meat products shall conform in detail to Regulations Governing the Meat Inspection of the U.S. Department of Agriculture. Stamping is not acceptable for canned meats, except date of pack (day, month, year) and net weight may be stamped on cans which are packed on a catch weight basis.

Canned poultry and canned poultry products. In addition to any special requirements in the commodity specification or the requirements listed herein, the labeling of canned poultry and canned poultry products shall conform in detail to the Regulations Governing the Grading and Inspection of Poultry and Edible Products Thereof, and the United States Specifications for Classes, Standards, and Grades with Respect Thereto of the U.S. Department of Agriculture. Stamping is not acceptable for canned poultry and poultry products, except date of pack (day, month, year) and net weight may be stamped on cans which are packed on a catch weight basis.

All other canned subsistence items. Except as otherwise specified in *Seasonal packs of canned fruit and vegetable items*, and in addition to any special requirement contained in, and unless otherwise specified by the commodity specification and this specification, the labeling of all other canned subsistence items shall conform in detail to the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

Seasonal packs of canned fruit and vegetable items. In addition to any special requirements contained in, and unless otherwise specified by the commodity specification and this specification, the labeling of seasonal packs of canned fruit and vegetable items shall conform to the requirements of *Cans supplied from stocks existing on date of award of contract*. Where an item is processed in various forms, i.e., whole, halves, quarters, and slices, the particular form shall be a necessary part of the nomenclature stamping. In addition, when canned fruit items are intended for use as ration components, labeling shall include the contractor's name and address.

Date of pack (meat and meat products, poultry and poultry products, and canned components of combat operational rations only). The date of pack (day, month, year) shall be embossed, impressed, or stamped on the body or one end of the can. The date shall be indicated as specified under *Date Marking* below.

Date Marking. The day of the month shall be the first figure or the first two digits shown; then the numerical equivalent of the month, or the abbreviation shall appear; then the last digit of the year of pack shall appear. If the date is applied by embossing, 5 characters, including spaces, if necessary, shall be used to indicate the date. If the dating results in 4 figures and one space, the space shall be left between the figure for the day and month. Stamped dates shall, in every case, have a space between the figure for the day, month, and year.

Examples:

4	Apr 88	.....Embossed	448
4	Apr 88	.....Stamped	448
8	Dec 89	.....Embossed	8129
8	Dec 89	.....Stamped	8129
25	Jul 90	.....Embossed	2570
25	Jul 90	.....Stamped	2570
27	Nov 91	.....Embossed	27111
27	Nov 91	.....Stamped	27111

Alternatively, date of pack may be coded using the following:

Day of the month - alphabet letters (block capitals), A through Z, shall be used to indicate the first through the 26th day, and 1 through 5 for the 27th through the 31st day.

Month - alphabet letters (block capitals), A through L, shall be used for the first through the 12th months.

Year - last digit of the process year shall indicate the year.

The code shall be on a line alone or the first three characters of one of the lines.

Examples:

4 Apr 88.....	DD8
8 Dec 89	HL9
25 Jul 90	YGO
27 Jul 91	IGI

Alternatively, the date of pack may be noted by using the following ""Julian" code. The first digit shall be the last digit of the year. The next three digits shall indicate the day of pack. The day of pack shall be the digits representing the day of the ordinary calendar year consisting of 365 days, with leap year containing 366 days.

Examples:

9 Jan 88	8009
4 Apr 89	9094
8 Dec 90	0343
25 Jul 91	1206

Marking fastness requirements. Markings shall meet the requirements as specified in the *Smear, Abrasion, Water, Salt Water and High Temperature Resistance* paragraphs below.

Smear Resistance. The markings on the can or label shall not smear when tested by rubbing with moderate pressure with a dry finger after allowing the markings to dry for at least 12 hours.

Abrasion resistance. The markings on cans which have been stamped or lithographed shall be legible after 50 cycles of abrasion when tested as specified in *Abrasion resistance test*.

Water resistance. The markings on the can shall be legible after exposure to boiling water when tested as specified in the *Boiling water test* (not required for non-processed food cans, or cans which are marked or labeled after processing).

Salt water resistance. Markings on the can or label shall be legible after immersion in salt water as specified in the *Salt water exposure test*. The tested specimens shall then be air dried for not less than 4 hours and shall withstand at least five abrasion cycles as specified in the *Abrasion resistance* test without loss of legibility.

High temperature resistance (tray pack items). Markings on the can or label shall be legible when tested as specified in the *Baking test* (tray pack items).

METHOD 2.

Commercial labeling. Commercial labeling other than paper labels will be acceptable.

Paper labels. When specified in the contract and requirements under *Methods applicable to overseas labeling*, commercial labels including paper labels will be acceptable.

QUALITY ASSURANCE PROVISIONS:

Contractor's responsibility. Inspection and acceptance by the USDA shall not relieve the contractor of obligation and responsibility to deliver a product complying with all requirements of this specification.

Quality conformance inspection. Unless otherwise specified, sampling, sampling for inspection shall be performed in accordance with ANSI/ASQC Z1.4.

Can labeling examination. The filled and sealed cans shall be examined for the defects listed in Table II. The lot size shall be expressed in cans. The sample unit shall be one filled and sealed can. The inspection level shall be I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for minor defects.

TABLE II. Can label defects

Defects	Category	
	Major	Minor
Not specified method	101	
Item nomenclature or directions for use (If specified) missing, incorrect, or illegible	102	
Additional information missing, incorrect, or illegible		201
Lithographed or stamped letters not required size		202
Lithographed or stamped letters not black 1/		203
Markings smear		204
Embossing or impressing (when an acceptable method) causes can or tinplate fracture	103	
Paper label (when permitted): Label torn or scratched so as to obliterate any of the markings on the label	104	
Label not properly glued to can (i.e., label raised or peeling back from edges or corners)		205

1/For coated cans only

End item testing. The end item (as applicable) shall be tested for the characteristics specified for each specific subsistence product. The lot shall be expressed in units of cans and the sample unit shall be 4 square inches of labeled area cut from a can. The inspection level shall be S-1 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for each test characteristic. Test requirements shall be unit requirements. Any test results not in conformance with requirements shall be considered a defect.

Abrasion resistance test. Abrasion resistance shall be determined as follows: Cut a test panel approximately 1 inch in width and 4 or more inches in length from a marked can with the line of lettering **14** inch from the end, except that when the can is less than 4 inches in length or diameter, the maximum possible length dimension shall be cut from the can for this test. The marking shall have dried at least 24 hours. Fill a container to a depth of 4 inches with Ottawa sand (100 to 150 mesh). The sand shall have been previously conditioned at 50 ± 2 % relative humidity and $73' \rightarrow 3.5'$ F. Under the same conditions of temperature and relative humidity, the strip suitably marked shall be pushed endwise into the sand then withdrawn in such a way that the lettering under test passes through 3 inches of sand on each stroke. Each cycle of inserting and withdrawing shall take approximately 1 second. Legibility of markings shall be observed after 50 cycles of abrasion have been accomplished.

Boiling water test. Test panels prepared as specified in the Abrasion resistance test with suitable lettering shall be immersed in boiling water. The panel shall be exposed to this treatment for 1 hour. Legibility of the markings shall be observed after this treatment.

Salt water exposure. Test panels prepared as specified in the Abrasion resistance test shall be immersed in a 5-percent solution of salt (NaCl) maintained at $77' \pm 2'$ F. After exposure for one week, remove the strip and allow to dry.

Baking test (tray pack items). Test panels prepared as specified in the Abrasion resistance test shall be baked in a 350' F oven for 60 minutes.

PACKAGING: No applicable requirements are stated herein.

NOTES:

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this DLA Troop Support Form.
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced
- c. When a Certificate of Compliance is desired (see Corrosion).
- d. Method of labeling required on cans for overseas shipment (see Method 1 and/or Method 2, as appropriate).
- e. Whether for domestic or overseas shipment or for combat operational rations.
- f. When paper labels are acceptable (see Method 2, Paper Labels).

Methods applicable to overseas labeling.

Method 1. Method 1 should be used when high degree of water resistance is desired and when extreme handling and climatic conditions and extended outside storage are anticipated.

Method 2. Method 2 should be used when a moderate degree of water resistance is desired and when extreme handling and climatic conditions and extended outside storage are not anticipated.

Paper labels. Paper labels may be used when it is known that shipping and handling will be under cover and storage will be in warehouse or other structures providing equivalent protection from the weather.