

SECTION C

This document covers shelf stable carbohydrate beverage powder packaged in a flexible pouch for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PCR-B-055A, BEVERAGE POWDER, CARBOHYDRATE, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE

Flavors and formulations.

Flavors.

Flavor 1 -	Fruit punch
Flavor 2 -	Grape
Flavor 3 -	Lemon-lime
Flavor 4 -	Orange
Flavor 5 -	Tropical punch
Flavor 6 -	Lemonade
Flavor 7 -	Mixed berry

Formulations.

Formulation a -	Fortified with ascorbic acid and enhanced with maltodextrin Ascorbic acid - Not less than 130 milligrams per 100 grams Maltodextrin - Not less than 37 grams per 100 grams
Formulation b -	Fortified with ascorbic acid and enhanced with maltodextrin Ascorbic acid - Not less than 64 milligrams per 100 grams Maltodextrin - Not less than 64 grams per 100 grams
Formulation c -	Enhanced with caffeine Caffeine - Not less than 280 milligrams and not greater than 360 milligrams per 100 grams.

C-2 PERFORMANCE REQUIREMENTS

A. Product standard. A sample shall be subjected to first article (FA) or product demonstration model (PDM) inspection as applicable, in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements (PCR) document. The approved sample shall serve as the product standard. Should the contractor at any time plan to or actually produce the product using different raw material or process methodologies from the approved product standard, which result in a product noncomparable to the product standard, the contractor shall submit a replacement FA or PDM for approval. In any event, all product produced must meet all requirements of this document including product standard comparability.

B. Shelf life. The packaged product shall meet the minimum shelf life requirement of 36 months at 80°F.

C. Powdered product.

(1) Appearance. The finished product shall be a uniform, free-flowing, homogenous dry mixture. The finished product shall be free from foreign materials.

(2) Odor. The packaged food shall have an odor typical of the flavor specified. The packaged food shall be free from foreign odors.

(3) Texture. The carbohydrate beverage powder shall be free from hard lumps.

(4) Net weight.

a. Formulation a. The net weight of an individual pouch shall be not less than 34 grams.

b. Formulation b. The net weight of an individual pouch shall be not less than 47 grams.

b. Formulation c. The net weight of an individual pouch shall be not less than 25 grams.

D. Hydrated product. The carbohydrate beverage powder, when hydrated according to directions for use, shall dissolve within 2 minutes of constant shaking.

(1) Appearance. The hydrated product shall be a clear to slightly cloudy, sediment-free liquid.

a. Flavor 1. The fruit punch beverage shall be a red color.

b. Flavor 2. The grape beverage shall be a purple color.

c. Flavor 3. Formulations a and b lemon-lime beverages shall be a light green color. Formulation c lemon-lime beverage shall be a yellow color.

d. Flavor 4. The orange beverage shall be an orange color.

e. Flavor 5. The tropical punch beverage shall be a red color.

f. Flavor 6. The lemonade beverage shall be a pale yellow color.

g. Flavor 7. The mixed berry beverage shall be a blue color.

(2) Odor and flavor. The packaged food shall be free from foreign odors and flavors.

a. Flavor 1. The fruit punch beverage shall have a moderate to strong sweet cherry and citrus fruit blend odor and flavor.

b. Flavor 2. The grape beverage shall have a moderate to strong sweet and sour grape odor and flavor.

c. Flavor 3. The lemon-lime beverage shall have a moderate to strong sweet and sour lemon-lime odor and flavor. Formulation c may have a mild bitter flavor.

d. Flavor 4. The orange beverage shall have a moderate to strong sweet and sour orange odor and flavor.

e. Flavor 5. The tropical punch beverage shall have a moderate to strong sweet and tropical fruit blend odor and flavor.

f. Flavor 6. The lemonade beverage shall have a moderate to strong sweet and sour lemon odor and flavor.

g. Flavor 7. The mixed berry beverage shall have a moderate to strong sweet, mixed berry odor and flavor and may have a mild bitter flavor.

(3) Texture. The carbohydrate beverage shall be a thin sediment-free liquid with no discernable lumps.

F. Palatability and overall appearance. The finished product shall be equal to or better than the approved product standard in palatability and overall appearance.

G. Analytical requirements.

(1) Moisture.

a. Formulation a. The moisture content shall be not greater than 3.5 percent.

b. Formulation b. The moisture content shall be not greater than 6.0 percent.

c. Formulation c. The moisture content shall be not greater than 2.0 percent.

(2) Ascorbic acid.

a. Formulation a. The ascorbic acid content shall be not less than 130 milligrams per 100 grams.

b. Formulation b. The ascorbic acid content shall be not less than 64 milligrams per 100 grams.

(3) Maltodextrin.

a. Formulation a. The maltodextrin content shall be not less than 37 grams per 100 grams.

b. Formulation b. The maltodextrin acid content shall be not less than 64 grams per 100 grams.

(4) Caffeine.

a. Formulation c. The caffeine content shall be not less than 280 and not greater than 360 milligrams per 100 grams.

SECTION D

D-1 PACKAGING

A. Packaging. The beverage powder shall be filled into a pouch. The pouch is to be used as a package and a hydrating pouch for the beverage powder.

(1) Flat interlocking closure pouch.

a. Pouch material. The pouch shall be fabricated from 0.002 inch thick ionomer or polyethylene film laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then bonded to 0.0005 inch thick polyester. Tolerances for thickness of plastic films shall be plus or minus 20 percent and tolerance for the foil layer shall be plus or minus 10 percent. The material shall show no evidence of delamination, degradation, or foreign odor. The material shall be suitably formulated for food packaging and shall not impart an odor or flavor to the product. The complete exterior surface of the pouch shall be uniformly colored and shall conform to number 20219, 30219, 30227, 30279, 30313, 30324, or 30450 of SAE AMS-STD-595, Colors Used in Government Procurement.

b. Pouch construction. The pouch shall be a flat design preformed or form-fill-seal pouch with an interlocking closure. The design and dimensions shall be as specified in figure 1. The pouch shall be made by heat sealing the sides and top of the pouch with 3/8 (+1/8, - 1/4) inch wide seals. The average seal strength shall be not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width. The interlocking closure of the pouch shall not leak more than 15 ml. A tear nick or notch shall be provided on one or two opposite edges of the pouch above the interlocking closure to facilitate opening of the filled and sealed pouch. A 1/8 inch wide lip may be incorporated at the open end of the pouch.

c. Pouch filling and sealing. Product shall be inserted into the pouch and the filled pouch shall be sealed with a 1/8 to 1 inch wide heat seal. The closure seal shall be applied not more than 1/2 inch from the open end of the pouch. The closure seal shall be free of foldover wrinkles or entrapped matter that reduces the effective closure seal width to less than 1/16 inch. Seals shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects. The average seal strength shall be not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width.

D-2 LABELING

A. Pouches. Each pouch shall be correctly and legibly labeled. Printing ink shall be permanent black ink or other dark contrasting color, which is free of carcinogenic elements. The label shall contain the following information:

- (1) Name and flavor of product (letters not less than 1/8 inch high)
- (2) Ingredients
- (3) Date 1/
- (4) Net weight
- (5) Name and address of packer
- (6) "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable Food and Drug Administration (FDA) regulations
- (7) Caffeine content per serving in milligrams (for formulation c)
- (8) Directions: Allow water just chemically purified to stand 30 minutes before adding to beverage powder. Tear pouch at notch. Open zipper, add 12 ounces of water (1/2 canteen cup) to fill line. Close zipper, shake to mix. *Single use only*.

Fill line: A fill line (not less than 1/32 inch thick, not less than 2 inches long and centered) shall be placed on the pouch/label for 12 ounce fill at $6\frac{1}{2} \pm \frac{1}{4}$ inches from the inside edge of the closure seal.

1/ Each pouch shall have the date of pack noted by using either a four-digit code or five-digit code. When using the four-digit code, begin with the final digit of the current year followed by the three-digit Julian code. For example, 14 February 2050 would be coded as 0045. When using the five-digit code, begin with the decade digit of the current year followed by the three-digit Julian code. For example, 14 February 2050 would be coded as 50045. The Julian code shall represent the day the product was packaged into the pouch.

D-3 PACKING

A. Packing. Not more than 40 pounds of product shall be packed in a fiberboard shipping box constructed in accordance with style RSC-L of ASTM D5118/D5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The fiberboard shall conform to type CF, class D, variety SW, minimum burst grade 200 or ECT 32 of ASTM D4727/D4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes. Each box shall be closed in accordance with ASTM D1974/D1974M, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.

D-5 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DLA Troop Support Form 3556, Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

The following quality assurance criteria, utilizing ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, are required. Unless otherwise specified, single sampling plans indicated in ANSI/ASQ Z1.4 will be utilized. When required, the manufacturer shall provide the Certificate(s) of Conformance to the appropriate inspection activity. Certificate(s) of Conformance not provided shall be cause for rejection of the lot.

A. Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

B. Classification of inspections. The inspection requirements specified herein are classified as follows:

(1) Product standard inspection. The first article or product demonstration model shall be inspected in accordance with the provisions of this document and evaluated for appearance, odor, flavor, and texture. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection of the lot.

(2) Periodic review evaluation. The approved first article or product demonstration model shall be used as the product standard for periodic review evaluations. All food components that are inspected by the U.S. Department of Agriculture (USDA) shall be

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subject to periodic review sampling and evaluation. The USDA shall select sample units during production of contracts and submit them to the following address for evaluation:

COMBAT CAPABILITIES DEVELOPMENT COMMAND (DEVCOM) SOLDIER CENTER
FCDD-SCD-SCR
10 GENERAL GREENE AVENUE
NATICK, MA 01760-5000

One lot shall be randomly selected during each calendar month of production or as otherwise specified in the contract. Three (3) sample units shall be randomly selected from that one production lot. The three (3) sample units shall be shipped to DEVCOM Soldier Center within five (5) working days from the end of the production month from which they are randomly selected and upon completion of all USDA inspection requirements. The sample units will be evaluated for overall quality against the current first article or product demonstration model.

(3) Conformance inspection. Conformance inspection shall include the examinations/tests and methods of inspection cited in this section.

E-5 QUALITY ASSURANCE PROVISIONS (PRODUCT)

A. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Performance-based Contract Requirements document utilizing the double sampling plans indicated in ANSI/ASQ Z1.4. The lot size shall be expressed in pouches. The sample unit shall be the contents of one pouch. The inspection level shall be S-3 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. Defects and defect classifications are listed in table I.

TABLE I. Product defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	
<u>Powdered product</u>		
<u>General</u>		
101		Product not a carbohydrate beverage powder or not flavor or not formulation as specified.
<u>Appearance</u>		
	201	Beverage powder not uniform or not free-flowing or not a homogenous dry mixture.
<u>Odor</u>		
102		Packaged food odor not typical of flavor specified.
<u>Texture</u>		
	202	Presence of hard lumps. <u>3/</u>
<u>Net weight</u>		
	203	Formulation a net weight of an individual pouch less than 34 grams.
	204	Formulation b net weight of an individual pouch less than 47 grams.
	205	Formulation c net weight of an individual pouch less than 25 grams.
<u>Hydrated product</u> <u>4/</u>		
<u>Appearance</u>		
	206	Hydrated product not clear to slightly cloudy or not a sediment-free liquid.
	207	Flavor 1 fruit punch beverage not a red color.

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
<u>Major</u>	<u>Minor</u>	
	208	Flavor 2 grape beverage not a purple color.
	209	Flavor 3 lemon-lime, formulations a or b beverages not a light green color.
	210	Flavor 3 lemon-lime formulation c beverage not a yellow color.
	211	Flavor 4 orange beverage not an orange color.
	212	Flavor 5 tropical punch beverage not a red color.
	213	Flavor 6 lemonade beverage not a pale yellow color.
	214	Flavor 7 mixed berry beverage not a blue color.
<u>Odor and flavor</u>		
103		Flavor 1 fruit punch beverage does not have a moderate to strong sweet cherry or not citrus fruit blend odor or flavor.
104		Flavor 2 grape beverage does not have a moderate to strong sweet or not sour grape odor or flavor.
105		Flavor 3 lemon-lime beverage does not have a moderate to strong sweet or not sour lemon-lime odor or flavor.
106		Flavor 4 orange beverage does not have a moderate to strong sweet or not sour orange odor or flavor.
107		Flavor 5 tropical punch beverage does not have a moderate to strong sweet or not tropical fruit blend odor or flavor.
108		Flavor 6 lemonade beverage does not have a moderate to strong sweet or not sour lemon odor or flavor.

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
<u>Major</u>	<u>Minor</u>	
109		Flavor 7 mixed berry beverage does not have a moderate to strong sweet or not mixed berry odor or flavor.
		<u>Texture</u>
	215	Carbohydrate beverage not a thin or not sediment-free liquid or has discernable lumps.

1/ Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, glass, wood, or metal, or any foreign odors or flavors such as, but not limited to burnt, scorched, rancid, sour, stale, musty or moldy shall be cause for rejection of the lot. Foreign flavors not applicable to powdered product.

2/ Finished product not equal to or better than the approved product standard in palatability and overall appearance shall be cause for rejection of the lot. Palatability not applicable to powdered product.

3/ Lumps that do not fall apart under light pressure shall be scored as a minor defect.

4/ Prior to conducting the hydrated product examination, the carbohydrate beverage powder shall be hydrated per label instructions. Product that does not fully dissolve within 2 minutes of constant shaking shall be cause for rejection of the lot.

B. Methods of inspection

(1) Shelf life. The contractor shall provide a Certificate of Conformance that the product has a 36 month shelf life when stored at 80°F. Government verification may include storage for 6 months at 100°F or 36 months at 80°F. Upon completion of either storage period, the product will be subjected to a sensory evaluation panel for appearance and palatability and must receive an overall score of 5 or higher based on a 9 point quality scale to be considered acceptable.

(2) Net weight. The net weight of the filled and sealed pouches shall be determined by weighing each sample unit on a suitable scale tared with a representative empty pouch. Results shall be reported to the nearest 1 gram.

(3) Analytical. The sample to be analyzed shall be a composite of eight filled and sealed pouches which have been selected at random from the lot. The composite sample shall be prepared and analyzed in accordance with the following methods of the Official Methods of Analysis (OMA) of AOAC International:

<u>Test</u>	<u>Method Number</u>
Moisture	925.45A or 2007.04
Vitamin C	984.26 or 967.21 <u>1/</u>
Caffeine	980.14 <u>1/</u>

Test results for moisture shall be reported to the nearest 0.1 percent. Test results for vitamin C and caffeine shall be reported to the nearest 1 milligram. Government verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the analytical requirement shall be cause for rejection of the lot.

1/ Tests will be conducted on formulations a and b for vitamin C and on formulation c for caffeine on the first production lot of a contract cycle. USDA will perform the verification testing and obtain a copy of the formulation used in the production of that lot. A Certificate of Analysis (CoA) for nutrient content for vitamin C and caffeine will be provided on all future lots produced using the same formulation. If the formula is changed or a new contract starts, then another set of tests shall be conducted by USDA, for vitamin C and caffeine, and USDA will obtain a copy of the formulation.

E-6 QUALITY ASSURANCE PROVISIONS (PACKAGING AND PACKING MATERIALS)

A. Packaging.

(1) Pouch material certification. The pouch material shall be tested for these characteristics. A Certificate of Conformance (CoC) may be accepted as evidence that the characteristics conform to the specified requirements.

<u>Characteristic</u>	<u>Requirement paragraph</u>	<u>Test procedure</u>
Thickness of film for laminated material	D-1,A(1)a	ASTM D2103 <u>1/</u>
Aluminum foil thickness	D-1,A(1)a	ASTM B479 <u>2/</u>
Laminated material identification and construction	D-1,A(1)a	Laboratory evaluation
Color of laminated material	D-1,A(1)a	SAE AMS-STD -595 <u>3/</u>

1/ Standard Specification for Polyethylene Film and Sheeting

2/ Standard Specification for Annealed Aluminum and Aluminum-Alloy Foil for Flexible Barrier, Food Contact, and Other Applications

3/ Colors Used in Government Procurement

(2) Unfilled preformed pouch certification. A CoC may be accepted as evidence that unfilled pouches conform to the requirements specified in D-1,A(1)a and b. When deemed necessary by the USDA, testing of the unfilled preformed pouches for seal strength shall be as specified in E-6,B(1)a.

(3) Filled and sealed pouch examination. The filled and sealed pouches shall be examined for the defects listed in table II. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major defects and 2.5 for minor defects.

TABLE II. Filled and sealed pouch defects 1/

<u>Category</u>		<u>Defect</u>
<u>Major</u>	<u>Minor</u>	
101		Tear or hole or open seal.
102		Seal width less than 1/16 inch. <u>2/</u>
103		Presence of delamination. <u>3/</u>
104		Unclean pouch. <u>4/</u>

105	Pouch has foreign odor.
106	Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. <u>5/</u>
107	Fill line missing or does not measure within $\pm 1/4$ inch of 6-1/2 inches from the inside edge of the closure seal.
108	Not packaged as specified.
201	Label missing or incorrect or illegible.
202	Tear nick or notch missing or does not facilitate opening.
203	Seal width less than 1/8 inch but greater than or equal to 1/16 inch.
204	Presence of delamination. <u>3/</u>
205	Pouch does not meet design or dimensions cited in figure 1.
206	Fill line on pouch not required thickness or length.
207	Pouch closure seal more than 1/2 inch from the open end of the pouch.

1/ Any evidence of rodent or insect infestation shall be cause for rejection of the lot.

2/ Effective seals are defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, that produces a hermetically sealed pouch.

3/ Delamination defect classification:

Major - Delamination of the outer ply in the pouch seal area that can be propagated to expose aluminum foil at the food product edge of the pouch after manual flexing of the delaminated area. To flex, the delaminated area shall be held between the thumb and forefinger of each hand with both thumbs and forefingers touching each other. The delaminated area shall then be rapidly flexed 10 times by rotating both hands in alternating clockwise- counterclockwise directions. Care shall be exercised when flexing delaminated areas near the tear notches to avoid tearing the pouch material. After flexing, the separated outer ply shall be grasped between thumb and forefinger and gently lifted toward the food product edge of the seal or if the separated area is too small to be held between thumb and

forefinger, a number two stylus shall be inserted into the delaminated area and a gentle lifting force applied against the outer ply. If separation of the outer ply in the body of the pouch can be made to extend to the product edge of the seal with no discernible resistance to the gentle lifting, the delamination shall be classified as a major defect. Additionally, spot delamination of the outer ply in the body of the pouch that is able to be propagated beyond its initial borders is also a major defect. To determine if the laminated area is a defect, use the following procedure: Mark the outside edges of the delaminated area using a bold permanent marking pen. Open the pouch and remove the contents. Cut the pouch transversely not closer than 1/4 inch ($\pm 1/16$ inch) from the delaminated area. The pouch shall be flexed in the area in question using the procedure described above. Any propagation of the delaminated area, as evidenced by the delaminated area exceeding the limits of the outlined borders, shall be classified as a major defect.

Minor - Delamination of the outer ply in the pouch seal area is acceptable and shall not be classified as a minor defect unless it extends to within 1/16 inch of the food product edge of the seal. Isolated spots of delamination in the body of the pouch that do not propagate when flexed as described above shall be classified as minor defects.

4/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause pouch damage (for example, glass, metal filings) or generally detracts from the clean appearance of the pouch. The following examples shall not be classified as defects for unclean:

a. Foreign matter which presents no health hazard or potential pouch damage and which can be readily removed by gently shaking the package or by gently brushing the pouch with a clean dry cloth.

b. Dried product which affects less than 1/8 of the total surface area of one pouch face (localized and aggregate).

5/ If doubt exists as to whether or not the sealing equipment leaves an impression or design on the seal surface that could conceal or impair visual detection of seal defects, score the impression and/or design as a major defect, retain the sample, and contact the Government agency supervisor or the contracting officer for instruction. Samples shall be furnished to the contracting officer for a determination as to acceptability.

B. Methods of inspection.

(1) Seal testing. The pouch integrity shall be tested as required in a or b, as applicable. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The sample size shall be the number of pouches indicated by inspection level S-1.

a. Seal strength test. The seals of the pouches shall be tested for seal strength in accordance with ASTM F88/F88M, Standard Test Method for Seal Strength of Flexible Barrier Materials. Three adjacent specimens shall be cut from each side and each end of each pouch in the sample. The average seal strength of any side or end shall be calculated by averaging the three specimens cut from that side or end. Any average seal strength of less than 6 pounds per inch of width or any test specimen with a seal strength of less than 5 pounds per inch of width shall be classified as a major defect and shall be cause for rejection of the lot.

b. Internal pressure test. The internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. If a three-seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the sides and end of the pouch and the distance between restraining plates shall be 1/2 inch. For testing the closure seal, the interlocking closure end shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product + 1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. Any test failing to reach and maintain 14 psig for 30 seconds during testing shall be considered a test failure. The pouches shall then be examined for separation or yield of the heat seals. Any evidence of seal separation greater than 1/16 inch in the seal shall be considered a test failure. Any seal separation that reduces the effective seal width to less than 1/16 inch shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

(2) Interlocking closure test. The interlocking closure of the pouch shall be tested. The lot size shall be expressed in pouches. The sample unit should be one pouch. The sample size shall be the number of pouches indicated by inspection level S-2. Open a filled and sealed interlocking closure pouch and prepare beverage in accordance with instructions using 70°F ($\pm 5^\circ\text{F}$) water. Close pouch. Invert pouch and suspend pouch for 15 seconds. Collect and measure any water that drips. Pouches that leak more than 15 ml shall be classified as a major defect and shall be cause for rejection of the lot.

C. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table III below. The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

TABLE III. Shipping container and marking defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Marking missing or incorrect or illegible.
102		Inadequate workmanship. <u>1/</u>
	201	More than 40 pounds of product.

1/ Inadequate workmanship is defined as, but not limited to, incomplete closure of container flaps, loose strapping, inadequate stapling, improper taping, or bulged or distorted container.

SECTION J REFERENCE DOCUMENTS

Unless otherwise specified, the applicable version of these documents is that which is active on the date of the solicitation or contract.

DLA Troop Support Form

Form 3556	Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence
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NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ) www.asq.org

ANSI/ASQ Z1.4	Sampling Procedures and Tables for Inspection by Attributes
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AOAC INTERNATIONAL www.aoac.org

Official Methods of Analysis (OMA) of AOAC International

ASTM INTERNATIONAL www.astm.org

B479	Standard Specification for Annealed Aluminum and Aluminum-Alloy Foil for Flexible Barrier, Food Contact, and Other Applications
D1974/D1974M	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
D2103	Standard Specification for Polyethylene Film and Sheeting
D4727/D4727M	Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes

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D5118/D5118M Standard Practice for Fabrication of Fiberboard
Shipping Boxes

F88/F88M Standard Test Method for Seal Strength of Flexible
Barrier Materials

SAE INTERNATIONAL www.sae.org

SAE AMS-STD-595 Colors Used in Government Procurement

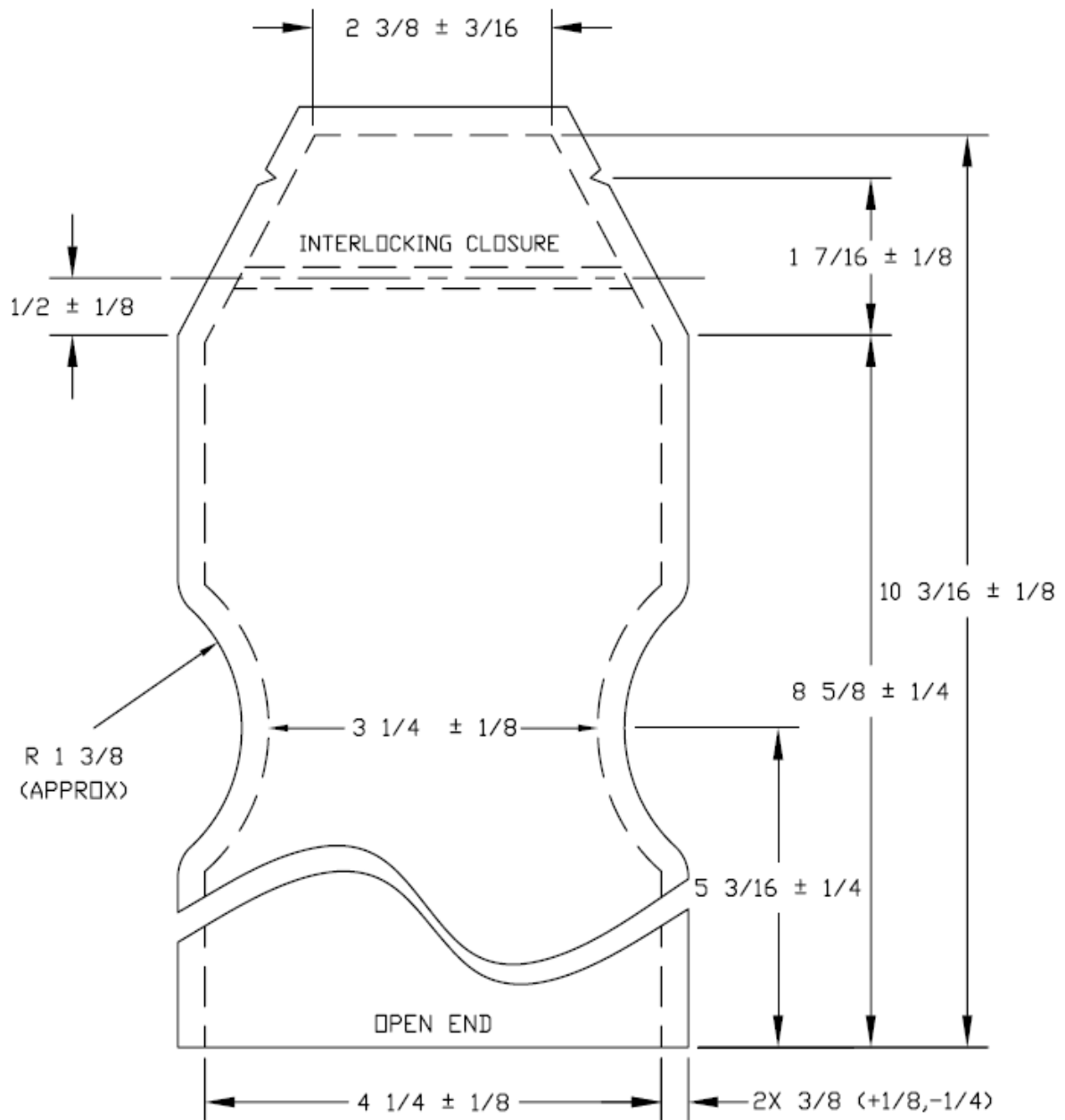


FIGURE 1. Flat Interlocking Closure Pouch