PKG&QAP A-A-20295D (Flexible Pouch)
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SUPERSEDING
PKG&QAP A-A-20295C (Flexible Pouch)
27 July 2012

SECTION C

This document covers cookies packaged in a flexible pouch for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR CID A-A-20295D COOKIES, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE

Type, styles, shapes, flavors, bake type, class, and agricultural practice.

Type I -	Regular
Style D -	Sugar cookies
Shape (b) -	Patriotic (American themes, such as, but not limited to; Uncle Sam, Bald Eagle, Torch of Liberty, letters "USA", American flag, Statue of Liberty face, etc.)
Shape (c) -	Animal
Style I -	Oatmeal cookies
Flavor 1 -	Plain
Flavor 6 -	Chocolate chunk
Bake type a -	Crisp
Class 1 -	Individual serving package
Agricultural practice (A) -	Conventional

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 Packaging Requirements and Quality Assurance Provisions 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. Appearance.

(1) Type I, style D, shape (b), bake type a. The cookies shall have at least three different patriotic shapes in each package.

(2) Type I, style D, shape (c), bake type a. The animal shaped sugar cookies shall have an off-white to light tan exterior surface color and shall have an off-white interior color. The cookies may have docker holes. The cookies shall have at least four different animal shapes in each package.

D. Odor and flavor. The packaged food shall be free from foreign odors and flavors.

(1) Type I, style D, shape c, bake type a. The animal shaped sugar cookies shall have a moderately sweet, buttery, and a mild vanilla odor and flavor.

(2) Type I, style I, flavor 1, bake type a. The plain oatmeal cookies shall have a sweet baked oatmeal and cinnamon odor and flavor.

(3) Type I, style I, flavor 6, bake type a. The chocolate chunk oatmeal cookies shall have a sweet baked oatmeal and chocolate odor.

E. Net weight. The net weight of one serving shall be not less than 56 grams.

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) Calories.

a. Type I, style D. The calories in the sugar cookies shall be not less than 240 per serving.

b. Type I, style I. The calories in the oatmeal cookies shall be not less than 280 per serving.

~~(2) Saturated fat (Type I, style I only). The saturated fat content in the oatmeal cookies shall be not greater than 3.0 percent.~~

(2) Saturated fat.

a. Type I, style I, flavor 1. The saturated fat content in the plain oatmeal cookies shall be not greater than 3.0 percent.

b. Type I, style I, flavor 6. The saturated fat content in the chocolate chunk oatmeal cookies shall be not greater than 5.0 percent.

(3) Oxygen (not applicable to vacuum packed pouches). The oxygen content of the filled and sealed pouch shall not exceed 0.30 percent.

(4) Moisture. The moisture content for type I, style D, shape (c), bake type a, animal sugar cookies shall be not greater than 5.0 percent. The moisture content for all other cookies shall be as specified in A-A-20295D.

H. Vegan requirement (Type I, style D, shape (c) only). Type I, style D, shape (c), product shall NOT contain any animal or animal by-products, honey or honeybee products, insects or products from insects such as silk or dyes or be processed with any animal products or by-products. This includes, but is not limited to oils, fats, fatty acids and their esters, flavorings, gelling agents, coagulants, binders, emulsifiers, extenders, fatty alcohol, aldehydes, and ketones, lactones, glycerol, amino acids, hydrolyzed proteins, enzymes, and enzyme modified products. Furthermore, these products shall NOT contain any ethyl alcohol, or ingredients derived from or containing methyl alcohol.

SECTION D

D-1 PACKAGING

A. Packaging. When specified, the cookies, with or without commercial packaging, shall be packed in a preformed or form-fill-seal barrier pouch.

(1) Preformed pouch.

a. Pouch material. The preformed pouch shall be fabricated from 0.002 inch thick ionomer or polyolefin film laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then laminated 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 style preformed pouch having maximum outside dimensions of 6 inches wide by 8-5/8 inches long. The pouch shall be made by heat sealing three edges with 3/8 inch (-1/8 inch, +3/16 inch) wide seals. The seals shall have an average seal strength of 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. A tear nick, notch, or serrations shall be provided 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. Type I, Style D product, with or without commercial packaging, and one oxygen scavenger shall be inserted into the pouch. Type I, Style I product, with or without commercial packaging, shall be inserted into the pouch and the filled pouch shall be sealed under a vacuum level of 8 to 12 inches of mercury with a minimum 1/8 inch wide heat seal. The filled pouch shall be sealed. The closure seal width shall be a minimum of 1/8 inch. 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.

(2) Horizontal form-fill-seal pouch.

a. Pouch material. The horizontal form-fill-seal pouch shall consist of a formed tray-shaped body with a flat sheet, heat sealable cover or a tray-shaped body with a tray-shaped heat sealable cover. The tray-shaped body and the tray-shaped cover shall be fabricated from a 3-ply flexible laminate barrier material consisting of, from outside to inside, 0.0009 inch thick oriented polypropylene bonded to 0.0007 inch thick aluminum foil with 10 pounds per ream pigmented polyethylene or adhesive and bonding the opposite side of the aluminum foil to 0.003 inch thick ionomer or a blend of not less than 50 percent linear low density polyethylene and polyethylene. The linear low density polyethylene portion of the blend shall be the copolymer of ethylene and octene-1 having a melt index range of 0.8 to 1.2 g/10 minutes in accordance with ASTM D1238, Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer and a density range of 0.918 to 0.922 g/cc in accordance with ASTM D1505, Standard Test Method for Density of Plastics by the Density-Gradient Technique. Alternatively, 0.0005 inch thick polyester may be used in place of the oriented polypropylene as the outer ply of the laminate. The flat sheet cover shall be made of the same 3-ply laminate as specified for the tray-shaped body except the aluminum foil thickness may be 0.00035 inch. Tolerances for thickness of plastic films shall be plus or minus 20 percent and tolerance for 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 any 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 tray-shaped body and the tray-shaped cover shall be formed by drawing the flexible laminate material into an appropriately shaped cavity. The flat cover shall be in the form of a flat sheet of the barrier material taken from roll stock. Type I, Style D product, with or without commercial packaging, and one oxygen scavenger shall be placed into the tray-shaped body of the pouch. Type I, Style I product, with or without commercial packaging, shall be inserted into the pouch and the filled pouch shall be sealed under a vacuum level of 8 to 12 inches of mercury with a minimum 1/8 inch wide heat seal. Pouch closure shall be effected by heat sealing together the cover and body along the entire pouch perimeter. The closure seal width shall be a minimum of 1/8 inch. The seal shall have an average seal strength of 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 maximum outside dimensions of the sealed pouch shall be 6 inches wide by 8-5/8 inches long. A tear nick, notch, or serrations shall be provided to facilitate opening of the filled and sealed

pouch. The sealed pouch shall not show any evidence of material degradation, aluminum stress cracking, delamination or foreign odor. Heat seals shall be free of 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.

(3) Oxygen scavenger. The oxygen scavenger shall be constructed of materials that are safe for direct food contact. The oxygen scavenger shall be in compliance with all applicable Food and Drug Administration (FDA) regulations.

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 FDA regulations.

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 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 product examination/tests and the 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 in A-A-20295D and specified in Section C of this Packaging Requirements and Quality Assurance Provisions 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
Major	Minor	
101		Product not type or not style or not shape or not flavor or not bake type or not class or not agricultural practice as specified.
102		Pouch does not contain one intact oxygen scavenger if specified. 3/ 4/
103		Crushed cookie(s). 5/
	201	Broken cookie(s). 6/
		Net weight
	202	Net weight of an individual pouch less than 56 grams.
		Type I, Style D, shape (b), bake type a - sugar cookies, patriotic, crisp
	203	Not a uniform pale gold to tan color.
	204	Package does not contain at least three different patriotic shapes.
104		Not sweet or not buttery or not a mild vanilla odor or flavor.
105		Not crisp or not tender.
		Type I, style D, shape (c), bake type a, - sugar cookies, animal, crisp 7/
	205	Not an off-white to light tan exterior surface color or not an off-white interior color.
	206	Package does not contain at least four different animal shapes.

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
Major	Minor	
106		Not moderately sweet or not moderately buttery or not a mild vanilla odor or flavor.
107		Not crisp or not tender.
		Type I, style I, flavor 1, bake type a - oatmeal cookies, plain, crisp 8/
108		Not a distinct sweet baked oatmeal or cinnamon odor or flavor.
	207	Exterior or interior crumb color not light tan to medium brown.
109		Not crispy or not crunchy or not slightly crumbly or not with a firm bite.
		Type I, style I, flavor 6, bake type a - oatmeal cookies, chocolate chunk, crisp 8/
110		Not a sweet baked oatmeal or chocolate odor or flavor.
111		Not crisp or not dense or not a slightly crumbly texture.
	208	Exterior or interior crumb color not light tan to medium brown.
	209	Chocolate chunks not distributed throughout the surface or interior.

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.

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.

3/ Construction of the oxygen scavenger and compliance with FDA regulations will be verified by Certificate of Conformance (CoC).

4/ The oxygen scavenger requirement is applicable to type I, style D.

5/ Ten grams of cookie crumbs, i.e., not discernible pieces, per pouch.

6/ For a pouch with one or two cookies, more than three broken pieces per cookie. For pouches with three or more cookies, more than half of the cookies are broken into three or more pieces.

7/ Type I, style D, shape (c) compliance with the vegan requirement shall be verified by a CoC. Any product not conforming to the requirement shall be cause for rejection of the lot.

8/ Verification that the finished product contains high oleic oil or shortening shall be with the statement of ingredients on the label.

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.

a. Commercially packaged product with oxygen scavenger. The net weight shall be verified with the label on the commercial package. Product not conforming to the net weight requirement in Section C of this Packaging Requirements and Quality Assurance Provisions document shall be cause for rejection of the lot.

b. Vacuum packed pouch. 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.

c. Commercially packaged vacuum packed product pouch. The net weight shall be verified with the label on the vacuum packed commercial package. Product not conforming to the net weight requirement in Section C of this Packaging Requirements and Quality Assurance Provisions document shall be cause for rejection of the lot.

d. Filled pouch with oxygen scavenger. The net weight shall be determined by weighing each sample unit on a suitable scale tared with a representative empty pouch and an oxygen scavenger. Results shall be reported the nearest 1 gram.

(3) Calories. The calorie content shall be verified by the NLEA "Nutrition Facts" label. Product not conforming to the calorie content as specified in Section C of this document shall be cause for rejection of the lot.

(4) Saturated fat. 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 Official Methods of Analysis (OMA) of AOAC International 996.06. Tests will be conducted for saturated fat on the first production lot of a contract cycle. USDA will perform verification testing and obtain a copy of the formulation used in the production of that lot. A Certificate of Conformance (CoC) will be provided on all future lots. If the formula is changed or a new contract starts, then another set of tests for saturated fat shall be conducted by USDA and USDA will obtain a copy of the formulation.

(5) Oxygen testing (not applicable to vacuum packed pouches). Eight filled and sealed pouches shall be randomly selected from one production lot and individually tested for oxygen content. Testing shall be accomplished after the filled and sealed pouches have been allowed to equilibrate at room temperature for not less than 48 hours from the time of sealing. Test results shall be reported to the nearest 0.01 percent. Government verification will be conducted through actual testing by a Government laboratory. Any individual result not conforming to the oxygen content requirement shall be cause for rejection of the lot.

(6) Moisture testing. Moisture content testing shall be in accordance with A-A-20295D.

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.

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

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) Pouch vacuum examination. The filled and sealed pouches shall be visually examined for conformance to the vacuum requirement not less than 96 hours after filling and sealing. The sealed pouch shall continue to exhibit tight adherence to the surface contours of the contents when a pulling force is applied at the center of each side seal. This force shall be applied by holding each side seal between thumb and forefinger of each hand, while simultaneously exerting a slight pull with both hands. Any evidence of loss of vacuum shall be classified as a major defect. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed pouch. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65.

(4) 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/

Category		Defect
Major	Minor	
101		Tear or hole or open seal.
102		Seal width less than 1/16 inch. 2/
103		Presence of delamination. 3/
104		Unclean pouch. 4/
105		Pouch has foreign odor.
106		Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. 5/
107		Not packaged as specified.
108		Presence of stress cracks in the aluminum foil. 6/ 7/
	201	Label missing or incorrect or illegible.
	202	Tear nick or notch or serrations 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. 3/

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 (±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.

6/ Applicable to form-fill-seal pouches only.

7/ The initial examination shall be a visual examination of the closed package. Any suspected visual evidence of stress cracks in the aluminum foil (streaks, breaks, or other disruptions in the laminated film) shall be verified by the following physical examination. To examine for stress cracks, the inside surface of both tray-shaped bodies shall be placed over a light source and the outside surface observed for the passage of light. Observation of light through the pouch material in the form of a curved or straight line greater than 2 mm in length shall be evidence of the presence of stress cracks. Observation of light through the pouch material in the form of a curved or straight line 2 mm in length or smaller or of a single pinpoint shall be considered a pinhole. Observation of ten or more pinholes per pouch shall be evidence of material degradation.

B. Methods of inspection.

(1) Seal testing. The pouch integrity shall be tested as required in a or b, as applicable. The lot 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 bottom of the pouch and the distance between restraining plates shall be 1/2 inch. For testing the closure seal, the bottom seal 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.

C. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table III. 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
Major	Minor	
101		Marking missing or incorrect or illegible.
102		Inadequate workmanship. 1/
	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

NON-GOVERNMENTAL STANDARDS

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

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

ASTM INTERNATIONAL www.astm.org

B479	Standard Specification for Annealed Aluminum and Aluminum-Alloy Foil for Flexible Barrier, Food Contact, and Other Applications
D1238	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
D1505	Standard Test Method for Density of Plastics by the Density-Gradient Technique
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

D5118/D5118M	Standard Practice for Fabrication of Fiberboard Shipping Boxes
F88/F88M	Standard Test Method for Seal Strength of Flexible Barrier Materials

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SAE-AMS-STD-595	Colors Used in Government Procurement