USDA COMMODITY REQUIREMENTS

WSB13
WHEAT-SOY BLEND
FOR USE IN EXPORT PROGRAMS

Effective Date: 09/01/05

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Part 1 COMMODITY SPECIFICATIONS

Section 1.1 WHEAT-SOY BLEND SPECIFICATIONS

A. Quality of Wheat-Soy Blend

(1) Wheat shall be tested for vomitoxin in accordance with procedures approved by Federal Grain Inspection Service (FGIS) and any wheat testing higher than 2 p.p.m. shall not be used in production of the commodity. The final product shall not contain more than 1 p.p.m. of vomitoxin.

(2) The product shall be of small particle size suitable for use as a dietary supplement for children in such forms as a beverage or gruel. When mixed with water, the product shall have a good characteristic taste and free from rancid, bitter, musty, sour, or other undesirable or foreign taste or odor.

(3) The product shall conform to the following analyses, unless otherwise specified, all analyses except moisture are expressed on a moisture-free basis.

Wheat Soy Blend

Item	Minimum	Maximum
Moisture	---	11.0%
Protein (Nx6.25)	20.0%	---
Crude Fat	6.0%	---
Ash	---	6.6%
Crude Fiber	---	2.5%
Lysine	0.9%	---
Material that will pass through a U.S. Standard No. 70 Woven-Wire-Cloth Sieve	97.0%	---
Total Bacteria Count	---	50,000 gm
Salmonella, E.Coli and Coagulase Positive Staphylococci will be negative		

B. Proportions

Ingredients	Pounds per 2,000 lb Batch
(1) Wheat fractions, total	1,458
a. Bulgur flour	1,058
b. Wheat protein concentrate, enzyme inactivated [1] **or**	400

[1] Alternatively, the wheat protein concentrate may be combined with the wheat being processed into bulgur at a point in the process that provides for cooking of the two ingredients as a mixture, provided that the wheat meets all

c. Straight grade flour cooked [2]	758
d. Wheat protein concentrate, enzyme inactivated [2]	700
(2) Soy flour, defatted (toasted) [3]	400
(3) Soybean oil, stabilized [3] [4]	80
(4) Minerals [5]	60
(5) Vitamin premix [5]	2

Section 1.3 INGREDIENT SPECIFICATIONS

A. Bulgur Flour

(1) Material

Bulgur shall be milled in the United States from cleaned wheat of any of the classes defined in the "Official United States Standards for Grain," which is available at: http://151.121.3.117/reference-library/standards/standards.htm, except mixed wheat and red durum wheat. The wheat will contain not more than 4.0 percent of damaged kernels. It will not be of distinctly low quality, light smutty, smutty, light garlicky, garlicky, weevily, ergoty, treated, musty, sour, or heating; and it shall not have any commercially objectionable foreign odor as these terms are interpreted and applied under the "Official United States Standards for Grain."

(2) Processing

The wheat shall be processed by washing, scouring, soaking in water, and cooking in water or in steam at atmospheric or higher pressures, then drying and partial debranning. The cooked product will be gelantinized but not dextrinized and have a translucent appearance. The partially debranned, cooked, and dried wheat will be cracked and further reduced in whole or in part to a flour-like fineness by grinding in suitable equipment.

(3) Analysis

In conformance with the chemical and physical requirements set forth in the table below (all components except moisture measured on a moisture-free basis):

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of the specifications listed for bulgur fiber content. However, in the subsequent milling and sifting process, a product shall be provided which, in combination with the other ingredients, meets all of the product specifications and particularly that for fiber content.

[2] These ingredients may be combined and processed as a mixture, if desired.

[3] As an alternate to the use of 400 pounds of defatted soy-flour and 80 pounds of soybean oil, these products may be replaced with 480 pounds of full fat soy-flour.

[4] If additional soybean oil is required to attain minimum fat content specified for the blend, the additional oil will replace an equal amount of bulgur or straight-grade flour.

[5] The minerals and vitamin premix shall not be combined and shall be added to the formulation separately.

Bulgur Flour

Item	Requirements	
	Minimum	**Maximum**
Moisture	---	11.5%
Protein (Nx5.7)	12.0%	---
Ash	---	1.8%
Crude Fiber	---	2.0%
Material that will pass through a U.S. Standard No. 70 Woven-Wire-Cloth Sieve	97%	---

B. Wheat Protein Concentrate, Enzyme-Inactivated

(1) Material

Wheat protein concentrate shall be obtained from total millrun middlings derived from normal flour milling operations.

(2) Processing

The wheat protein concentrate will be prepared by regrinding and sifting, fine-grinding and air classification, or other similar means of obtaining the desired fraction from the starting materials. Either the starting materials or the product after grinding and sieving will be heated in moist condition so as to inactivate enzymes, and to reduce any raw or bitter flavors, without significantly damaging the nutritive properties of the product as would accompany any toasting sufficient to cause color darkening, If desired, the protein concentrate may be heat processed in a mixture with straight-grade flour or wheat in bulgur process.

(3) Analysis

In conformance with the chemical and physical requirements set forth in the table below (all components except moisture measured on a moisture-free basis):

Wheat Protein Concentrate

Item	Requirements	
	Minimum	**Maximum**
Moisture	---	13.0%
Protein (Nx6.25)	23.3%	---
Crude Fat	4.7%	---
Ash	---	5.6%
Crude Fiber	---	3.5%
Lysine	1.0%	---

(4) Peroxidase Test: The wheat protein concentrate after heat-treatment for enzyme inactivation [or the combined products, wheat (bulgur) plus wheat protein concentrate or flour plus wheat protein concentrate] shall meet the

following for peroxide inactivation:

a. Reagents
   (i) Distilled water
   (ii) 0.5 percent guaiacol in 50 percent ethyl alcohol solution.
   (iii) 0.08 percent hydrogen peroxide (2.8 cc of 30 percent hydrogen peroxide per liter). Keep in refrigerator in dark bottle, and renew each week or two.

b. Apparatus
   (i) Test tubes, 3/4 or 7/8 inch in diameter.
   (ii) Three inch or four inch diameter funnels.
   (iii) Six inch or seven inch cotton milk filters.
   (iv) Waring blender or similar mixer.
   (v) Fifty cc. graduated cylinder
   (vi) One cc. and two cc. pipettes
   (vii) Timer or watch with second hand.
   (viii) Test-tube rack.
   (ix) Balance which will weigh 10-gram samples to +0.1 gram (any triple-beam-type balance is recommended in preference to the single-beam, Harvard type).

c. Procedure
   (i) Weigh out representative 10 gram sample.
   (ii) Place in blender with 300 cc. of distilled water.
   (iii) Grind for 1 minute at moderate or high speed.
   (iv) Filter through cotton milk filter.
   (v) Add two-cc. of filtrate to 20 cc. of distilled water in test tube.
   (vi) Add one cc. of 0.5 percent guaiacol solution without mixing.

d. Add one cc. of 0.08 percent hydrogen peroxide without mixing.

e. Mix contents thoroughly by inverting and watch for development of color. If none develops in 3-1/2 minutes, consider the test negative and the product adequately treated. In the case of a positive test, the color development will be of sufficient intensity to be easily recognizable. In order to eliminate any question as to color development within 3-1/2 minute period, prepare a tube without the addition of guaiacol and hydrogen peroxide, containing 22 cc. of water and 2 cc. of the filtrate. This will serve as a color comparison standard and will not develop color.

C. **Wheat flour, straight grade, cooked**

(1) Material

Straight-grade flour shall be milled from cleaned and normally scoured wheat.

(2) Processing

The straight-grade flour shall comply with the Definitions and Standards

of Identity for Wheat Flour, as defined under the "Federal Food Drug, and Cosmetic Act," and regulations promulgated thereunder. This flour will be further processed in such a manner as to effect substantially complete gelatinization and moderate degradation of the starch, inactivation of enzymes, and essential freedom from a raw starch flavor or odor, without significantly damaging the nutritive properties of the product as would accompany any toasting sufficient to cause color darkening. (If desired, the wheat flour may be processed in a mixture with wheat protein concentrate.

(3) Analysis
In conformance with the chemical and physical requirements set forth in the table below (all components except moisture measured on a moisture-free basis):

Straight-Grade Wheat Flour

	Requirements	
Item	**Minimum**	**Maximum**
Moisture	---	14.0%
Protein (Nx6.25)	11.0%	---
Ash	---	0.56%

(4) The wheat flour ingredients when processed alone or when processed in a mixture with wheat protein concentrate shall meet the test for peroxidase inactivation.

D. **Soy-flour, defatted, toasted**

(1) Material and Processing: Soy-flour defatted (toasted) will be the screened, finely ground product obtained from selected soybeans by cleaning, cracking, dehulling, tempering, flaking, defatting with hexane, desolventizing, deodorizing, toasting (full cook with color change to light yellow or golden buff), and cooling. In addition to the usual biological changes brought about by cooking of soybean protein products, this full cook process tends to remove undesirable flavor compounds and change the color of the soy-flour to a golden buff.

(2) Analysis: In conformance with the chemical and physical requirements set forth in the table below (all components except moisture measured on a moisture-free basis):

Defatted Soy-Flour (Toasted)

	Requirements	
Item	**Minimum**	**Maximum**
Moisture	---	10.0%

Protein (Nx6.25)		50.0%	---
Fat [6]		0.6%	---
Fiber		---	3.5%
Ash		---	6.5%
Material that will pass through a U.S. Standard No. 100 Woven-Wire-Cloth Sieve		95.0%	---
Nitrogen Solubility Index		10.0%	30.0%
Urease activity, increase in pH		0.05	0.15
Total bacteria count per gram		---	50,000
Color	Light yellow to golden buff		
Odor	Neutral to nutty		
Taste	Pleasant, neutral to slightly nutty		
Texture	A homogeneous flour		

E. **Soybean Oil**

(1) Soy oil, refined, deodorized, and stabilized, will contain 0.005 percent citric acid added on the cooling side of deodorization. The soy oil will comply with the requirements as specified in the Commercial Item Description (CID) for salad oils (vegetable), A-A-20091D, dated May 7, 2002, which is available at http://www.ams.usda.gov/fqa/aa20091d.htm. Refer to type A nonwinterized salad oil. [7]

(2) Before addition to the product, the oil may be stabilized by the addition of butylated hydroxy anisole and butylated hydroxy toluene, each at a level of 2.5 mg per 100 grams of formulated product. **Caution**: Antioxidant may be added to either the soy oil or to the vitamin antioxidant premix, but it shall not be added to both.

F. **Minerals**

Minerals shall be added in the amounts prescribed in the table below.

Formulation	Ingredients	Per 2,000 lbs. of Product
1	2% Tri-Calcium Phosphate	40.0 lbs
2	1.8% Calcium Carbonate + 1.6% Monobasic Sodium Phosphate	36.0 lbs 32.0 lbs
3	1.8% Calcium Carbonate + 1.6% Monobasic Potassium Phosphate	36.0 lbs 32.0 lbs
4	1.3% Tri-Calcium Phosphate + 0.6% Dibasic Calcium Phosphate	26.0 lbs 12.0 lbs
5	0.9% Tri-Calcium Phosphate +	18.0 lbs

[6] Soybean oil may be added to defatted soy-flour or to the blend in order to meet fat content specifications for the product.

[7] Analytical Data for type A Salad Oil in Commercial Item Description (CID) for salad oils (vegetable), A-A-20091D.

	0.6% Calcium Carbonate + 0.8% Monobasic Sodium Phosphate	12.0 lbs 16.0 lbs
6	0.9% Tri-Calcium Phosphate + 0.6% Calcium Carbonate + 0.8% Monobasic Potassium Phosphate	18.0 lbs 12.0 lbs 16.0 lbs
7	1.7% Di-Calcium Phosphate Anhydrous + 0.5% Calcium Carbonate	34.0 lbs 10.0 lbs
8	2.2% Di-Calcium Phosphate + 0.5% Calcium Carbonate	44.0 lbs 10.0 lbs
9	Zinc Sulfate, Monohydrate ($ZnSO_4 \cong 7H2O$)	0.25 lbs (113.45 g)
10	Ferrous Fumarate, FCC grade, purified	0.92 lbs (418 g)
11	Magnesium Oxide (MgO)	2.75 lbs
12	Iodized Salt (0.007% 12) [8]	16.25 lbs

G. **Vitamin Antioxidant Premix**

Vitamin Antioxidant Premix shall be added in the amounts prescribed in the table below.

Ingredients	**Per 2,000 lbs Product**
Thiamin mononitrate	2.5 g
Riboflavin	3.5 g
Pyridoxine hydrochloride	1.5 g
Niacin	45.0 g
Ca D-pantothenate	25.0 g
Folic acid	1.8 g
Vitamin B12 [9]	12.0 mg
Vitamin A Palmitate (stabilized) [10]	21.0 million IU
Vitamin D (stabilized)	1.8 million IU
Alpha tocopherol acetate	68,000.0 IU
Butylated hydroxy anisole [11]	20.0 g
Butylated hydroxy toluene	20.0 g

[8] The increase in iodized salt content represents a 25 percent increase in iodine content from previous specifications as recommended.

[9] Represents a reduction of 67 percent from previous specifications.

[10] Vitamin A Palmitate (stabilized) shall be added in encapsulated form containing 250,000 IU Vitamin A Palmitate/g. Particle size shall comply with the requirement that at least 98 percent will pass through a U.S. Standard No. 50 sieve, at least 90 percent through a U.S. Standard No. 60 sieve, and at least 45 percent through a U.S. Standard No. 100 sieve. The product shall be not less than 95 percent of the all-trans isomer as determined by the USP assay procedure. The Vitamin A Palmitate shall have storage stability such that not more than 20 percent of its original activity will be lost when stored for 21 days at 45˚ C in a sealed container at a level of 10,000 to 12,000 IU per pound in cornmeal having a moisture content in the range of 13.5 to 14.5 percent.

[11] If antioxidant is added in soy oil, omit from this premix.

Ascorbic acid (stabilized), ethyl-cellulose (coated), soy flour, defatted (toasted) or starch to reach total weight, (additional soy flour may be added as a carrier, if desired)	364.0 g
Total	**2.0 lbs**

(1) The minerals and vitamin premix shall not be combined and shall be added to the formulation separately.

(2) The requirement for Vitamin A shall be 80 percent of the target (or maximum) level included in the specification. The requirement for iron and vitamin A shall be as follows:

Item	**Requirements**	
	Minimum	**Maximum**
Vitamin A	8400 IU/lb	16,000 IU/lb
Iron	14.7 mg/100g	---

Contractors are required to maintain records verifying compliance with the Vitamin A and iron requirements. Contractors shall have composite samples that are tested for Vitamin A and iron. Laboratory testing shall be conducted according to the Association of Official Analytical Chemists approved methods.

Section 1.3 QUALITY ASSURANCE

A. The contractor shall perform the product testing and quality analysis to ensure that the product meets the commodity specifications. The results shall be evidenced by a Certificate of Analysis (COA). Copies of the original COA must be submitted as part of the invoice package. The COA shall provide the results of all tests specified. If quality discounts are provided in the contract, and the product to be delivered by the contractor falls within the quality discount table, those factors shall be identified by an asterisk on the copies of the COA.

B. Contractors shall notify the Government immediately of lots that fail to meet contract requirements.

C. Unless otherwise specified, test methods for the finished product, and any ingredients therein, shall be those of the AOAC INTERNATIONAL, the American Association of Cereal Chemists (AACC), or the American Oil Chemists' Society (AOCS), as applicable and in effect on the date of issuance of the solicitation, or in accordance with methods that give equivalent results.

Section 1.4 QUALITY DISCOUNTS

A. If the product to be delivered by the contractor does not meet the quality specifications, but falls within the discounts listed, the product may be delivered to the Government, but the purchase price will be reduced in accordance with the schedule of discounts in the table below for each 100 pounds of commodity delivered.

B. At the contractor's option, commodity which is rejected because of the presence of salmonella may be subjected to a continuous heat process at temperatures up to a maximum of 120˚ F (not to be exceeded) for a period of up to ten days maximum. If during the period of the process, the commodity is reinspected, retested, and certified as meeting all finished product requirements including salmonella negative, the product will be accepted by the Government.

Discounts

Excess Moisture		**Deficient Protein**	
11.1% or 11.2%	$0.10	19.9% or 19.8%	$0.10
11.3% or 11.4%	$0.20	19.7% or 19.6%	$0.20
11.5%	$0.35	19.5%	$0.35
Excess Crude Fiber		**Excess Ash**	
2.6% or 2.7%	$0.10	6.7% or 6.8%	$0.10
2.8% or 2.9%	$0.20	6.9% or 7.0%	$0.20
3.0%	$0.35	7.1%	$0.35
Deficient Crude Fat		**Deficient Lysine**	
5.9% or 5.8%	$0.10	0.8%	$0.10
5.7% or 5.6%	$0.20	0.7%	$0.20
5.5%	$0.35		
Deficient Granulation through a No. 70 Sieve			
96% or 95%	$0.10		
94% or 93%	$0.20		
92%	$0.35		

Part 2 CONTAINER AND PACKAGING REQUIREMENTS

Section 2.1 GENERAL

This part provides the container specifications and packaging materials requirements used under this contract.

Section 2.2 CONTAINERS AND MATERIALS

A. All containers and packaging materials shall be manufactured and assembled in the United States. The components that make up the fabricating materials of the containers and packaging materials shall be of U.S. origin to the extent that they are commercially available. Questions concerning the availability of a material should be directed to:

USDA/FSA/DACO
Room 5755 – South Bldg, STOP 0551

1400 Independence Avenue SW
Washington, DC 20250-0551
ATTN: Packaging

B. Constructed to meet the requirements of the Food and Drug Administration (FDA) for safe contact with the packaged product.

C. The contractor shall obtain and maintain documentation from the container or packaging material manufacturer to verify that the containers and packaging materials used in this contract were in compliance with the Government's requirements.

Section 2.3 25-KILOGRAM MULTIWALL PAPER BAGS

A. Twenty-five kilograms of product shall be packed in Pinch Bottom Open Mouth (PBOM) style multiwall paper bags. The use of recycled materials is not required if performance or food safety is jeopardized.

B. The bag shall have two inner walls of 50-pound nominal basis weight natural kraft paper and an outer third wall of 60-pound nominal basis weight wet strength paper in accordance with Uniform Freight Classification, Rule 40, Section 10, Tables A and B, as amended.

C. The bag shall have a inner plastic liner constructed of linear low density polyethylene (LLDPE) film. The film liner shall:

(1) Be a minimum thickness of 2.5 mil. with a density of 0.914 to 0.929 g/cc and a minimum heat-seal coefficient of 0.60. The film shall have a minimum impact resistance of 265g when tested in accordance with ASTM D-1709 Method A, as amended, Falling Dart.

(2) The film liner shall have 8 to 12 micro perforations in each gusset area to allow for the evacuation of air from the product after filling and sealing.

(3) Have a sufficient amount of anti-block. It shall be free from any blocking at 50^{o}C and not subject to reblock at 70^{o}C.

(4) The film liner shall be loose for the full length of the bag except around the bottom and top closure areas. At the top and bottom closure areas, the liner shall adhere to the inner-most paper ply (time lamination). The laminating adhesive shall be machine direction applied in narrow strips no longer than 4 inches from each end. The use of gravure lamination to bond the liner to the inner-most paper ply for the entire length of the bag is prohibited.

(5) Be adhered to prevent product from getting between the inner film and the next outer paper ply.

(6) Not exceed a maximum average water vapor permeability of 0.65 grams per 100 square inches in 24 hours at 90 percent relative humidity and a temperature of 100^{o}F plus or minus 5 degrees.

(7) Be manufactured to meet Food and Drug Administration requirements

for food products (21 CFR 177.1520, as amended).

(8) Be heat-sealed at the bottom by the bag manufacturer. The top of the liner shall be heat-sealed by the packer once the bag has been filled with product.

D. Longitudinal seams of the outer wall of the bag shall be glued so that there is no more than 3/16-inch of unglued edge on the outer surface of the bag. The adhesives used in the longitudinal seams and pasted end closures shall be water resistant. Water resistant adhesive of outer ply longitudinal seams or pasted end closures shall be tested for resistance to water in accordance with TAPPI T456 (Wet Tensile Test), except as follows:

Cut test specimens 1-inch wide so that the longitudinal seam or pasted end closure runs perpendicular to and is centered relative to the long dimension of the specimen. The test specimen shall encompass all adhesive bonded areas included in fabricating the seam or end closure. In the case of multi-ply end closures, clamp all plies in the jaws of the tester. Immerse the specimens in not less than 1-inch of the distilled water for 24 hours. Run a wet tensile test. A test specimen fails the test if failure occurs with the separation of the seam or closure and less than 25% of the separated adhesive area shows fiber tear. Failure of more than 10% of the specimens shall be reported as failure of the adhesive.

Section 2.4 25-KILOGRAM HIGH PERFORMANCE PACKAGING CONSTRUCTIONS

A. Contractors shall utilize one of the following constructions when the solicitation requires the use of high performance packaging:

(1) Multiwall paper bag constructed of: One (1) ply inner film liner guaranteed 2.5 mil. minimum thickness linear low density polyethylene, four (4) plies of 50-pound natural multiwall kraft (NMK) paper, and one (1) outer ply of 60-pound wet strength natural multiwall kraft (WSNMK) paper; or

(2) Multiwall paper bag constructed of: 3.1 mil. (70 grams per square meter) film consisting of two or more layers of co-extruded polyolefin film with alternating angles of orientation, laminated together and biaxially oriented, two (2) plies of 50-pound NMK paper, and one (1) outer ply of 60-pound WSNMK paper. The bag shall be heat-sealed at the bottom, by the bag manufacturer. The top of the liner shall be heat-sealed by the packer once the bag has been filled with products.

(3) Both bag constructions shall:

(a) be uniquely marked with a one (1) inch blue stripe located approximately three (3) inches above the letters “USA” and extending around the width of each bag;

(b) meet the specifications and testing requirements outlined in these commodity requirements.

Section 2.5 OUTER CLOSURE AND SEALS

A. The bottom and top of the 25-kilogram bag shall be closed to provide a tight seal using hot-melt or thermoplastic adhesive applied in a single band along the top edge of the long side of the bag and extending downward at least 3/4 inches. The fold line on the manufacturer closure end shall be 1-3/4 inches plus or minus 1/4-inch. The fold line on the field closure end shall be 1-5/8 inches plus or minus 1/4-inch. Refer to section 3.1.L. for bag closure guide location bars.

B. The outer wall of the bag shall be stepped at the bottom and top fold over flap, beyond all inner walls, in order to provide a positive seal over the ends of the inner walls so that there is no more than 3/16 inches unbonded edge beyond the adhesive line. The inner polyethylene film may be heat-sealed.

Section 2.6 PERFORMANCE TEST PROCEDURES

A. All bags shall be capable of withstanding the following performance test for impact resistance:

(1) Ten filled and sealed bags shall each survive a single drop test on the butt and side on a shock machine that produces for each test a velocity change of 195 inches per second using a shock duration of .002 seconds without loss of product.

(2) Testing shall be conducted under standard temperature (73.4^{o}F plus or minus 1.8^{o}F) and relative humidity (50% plus or minus 2%) conditions.

(3) Filled bags shall be placed in the conditioned atmosphere for sufficient time before the tests are conducted for the bag materials to reach equilibrium.

(4) Bags submitted under this performance specification shall conform to all other applicable material, construction, and performance specifications.

B. Test Laboratories

Independent or private laboratories known to be capable of conducting the shock machine test described above are as follows:

Michigan State University School of Packaging East Lansing, MI 48824-1223 (517) 355-9580 http://packaging.msu.edu/	Lansmont Corporation 1287 Reamwood Sunnyvale, CA 94089 (408) 734-9724 Lansmont Corporation 6539 Westland Way, Suite 24 Lansing, MI 48917 (888) 526-7666 www.lansmont.com
Rutgers University	Ten-E Packaging Services, Inc.

Packaging Science and Engineering Dept. P.O. Box 909 Piscataway, NJ 08854 (201) 932-3679	1666 County Road 74 Newport, MN 55055 (651) 459-0671 www.ten-e.com

Section 2.7 SEAL PEEL TEST

A. The contractor shall perform periodic seal peel tests on the filling end of multiwall paper bags to determine whether the paper plies are adequately adhered. The seal peel test shall be performed at every start up and a minimum of every hour during commodity packing operations. The seal peel test shall demonstrate tear of paper fiber (fiber tear) for all paper plies. The contractor shall maintain records of seal peel test results for review by the Government.

B. The seal peel test shall be performed as follows:

(1) Run an empty bag through the sealing unit.
(2) Cut bag approximately 3 to 8 inches below the seal.
(3) Cut both gussets along the center crease to the top of the bag end.
(4) Spread bag to expose poly liner.
(5) Check inside plastic liner along the closure and gussets to determine that the liner is heat-sealed. Pinholes, no larger than 1/8 inch in diameter, are allowable in the closure.
(6) Grip inside fold at center of the bag end.
(7) Pull apart sides of the bag end at the center, separating seals. (If the seal is good, fibers shall completely cover adhesive. If the seal is poor, glossy adhesive will show).

C. The contractor's seal peel test records shall include the following information for each test: date, time, employee's name, product, contract number, railcar number, and result of the test. The result of the test shall be reported as either "good seal" or "poor seal", “insufficient fiber tear”, as applicable. The contractor shall take corrective action if the seal peel test indicates a poor seal and shall retest until a good seal is achieved.

PART 3 MARKING REQUIREMENTS

Section 3.1 MARKINGS

A. The bags shall be marked in the color specified in the markings exhibits. Any markings not shown on the exhibits shall be printed in blue. When printed on the bag, the colors blue and red shall match the Pantone Matching System (PMS) chart numbers 280 and 200, respectively, to the extent practicable.

B. All dimensions are approximate. Unless otherwise specified, all characters shall be in normal block print.

C. The letters USA shall be Univers black (75) oblique, or Helvetica extra bold with 70% scaling and -70 tracking or equivalent to match the style as shown in the exhibits. The letters USA shall be 4 3/4 inches high and 9 3/4 inches in total width. The three stripes adjacent USA shall be 1 inch high and must extend to the edge of the panel.

D. The USAID logo shall be printed in the same style as shown in the exhibits. The logo shall be sized approximately 4 5/8 inches in diameter. The USDA logo shall be 4 1/2 inches high and 6 1/2 inches in total width. See exhibits.

E. The commodity name shall be 1 1/4 inch print. Immediately below the commodity name on the front and back panels, insert additional commodity description in 5/8 inch print, if applicable.

F. The contract number and the statement "NOT TO BE SOLD OR EXCHANGED" shall be 3/4 inch print. The net weight, bag dimensions, and the Standard Marking Requirements (SMR) or Language Marking Requirements (LMR) number shall be centered at the bottom of the bag in 1/2 inch print. See exhibits. The contractor shall obtain a waiver, in writing, from the Government to print the contract number using on-line printing on filled bags.

G. The geometric symbols shall appear as shown in the exhibits.

H. The US Flag shall be 5 inches high and 9 inches in total width, on the back of the applicable bag. See exhibits.

I. The letters or symbols used in the language markings for LMR-1, LMR-3 and LMR-4, LMR-5, LMR-7, and LMR-8 should be sized approximately 1 5/8 inches. The language markings for LMR-2 and LMR-6 should be sized to fit. See exhibits.

J. Lot numbers, production codes or any other means of identification required to meet the traceability requirement shall be printed as small as possible, yet legible.

K. Gussets. The geometric symbols shall appear in both gussets, adjacent to USA, as shown in the exhibits. The letters USA shall be 3 inches high and printed in both gussets.

L. Bag Closure Guide Location Bars (BCGL) shall be printed on the front panel of all multi-wall paper bags, as shown in the exhibits. The BCGL bars shall be plainly visible, approximately one inch in length, printed in blue in two parallel rows evenly spaced over the entire width of the bag. The BCGL bars are to be used as visual quality control verification. Visually identifying two bars or no bars on the bag would indicate a bag closure failure. Visually identifying one bar would indicate a proper bag closure. (Exhibits A &B)

Section 3.2 MARKING DESCRIPTIONS

The Government shall furnish required markings within two business days after the date of the contract. The procurement of containers should be deferred for at least two business days after the date of the contract.

The following standard marking requirements may be requested under the contract:

Standard Marking Requirement #1 (SMR-1)
USAID – Distribution
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USAID logo, contract number, net weight, dimensions, "SMR-1". See exhibit SMR-1, front.
Back: US Flag in place of the USA with stripes, otherwise same as front. See exhibit SMR-1, back.

Standard Marking Requirement #2 (SMR-2)
FAS - Distribution
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USDA logo, contract number, net weight, dimensions, "SMR-2". See exhibit SMR-2, front.
Back: Identical. See exhibit SMR-2, back.

Standard Marking Requirement #3 (SMR-3)
USAID – Monetization
Front: USA with stripes, the commodity name, USAID logo, contract number, net weight, dimensions, "SMR-3". See exhibit SMR-3, front.
Back: US Flag in place of the USA with stripes, otherwise, same as front. See exhibit SMR-3, back.

Standard Marking Requirement #4 (SMR-4)
FAS or USAID - Monetization
Front: USA with stripes, the commodity name, contract number, net weight, dimensions, "SMR-4". See exhibit SMR-4, front.
Back: Identical. See exhibit SMR-4, back.

Language Marking Requirement #1 (LMR-1)
USAID – Distribution for North Korea
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USAID logo, contract number, net weight, dimensions, and "LMR-1.". See exhibit LMR-1, front.
Back: US Flag, the commodity name, North Korean language panel, and "LMR-1" only. See exhibit LMR-1, back.

Language Marking Requirement #2 (LMR-2)
USAID – Distribution for Afghanistan, with Pashtu and Dari
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD

OR EXCHANGED," USAID logo, contract number, net weight, dimensions, and "LMR-2." See exhibit LMR-2, front.
Back: US Flag, the commodity name, Pashtu and Dari language panel, and "LMR-2" only. See exhibit LMR-2, back.

Language Marking Requirement #3 (LMR-3)
USAID – Distribution for South Africa Region
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USAID logo, contract number, net weight, dimensions, and "LMR-3." See exhibit LMR-3, front.
Back: US Flag, the commodity name, English language panel, and "LMR-3" only. See exhibit LMR-3, back.

Language Marking Requirement #4 (LMR-4)
USAID – Distribution for Iraq with Arabic
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USAID logo, contract number, net weight, dimensions, and "LMR-4." See exhibit LMR-4, front.
Back: US Flag, the commodity name, Arabic language panel, and "LMR-4" only. See exhibit LMR-4, back.

Language Marking Requirement #5 (LMR-5)
FAS – Distribution for North Korea
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USDA logo, contract number, net weight, dimensions, and "LMR-5." See exhibit LMR-5, front.
Back: USA with stripes, the commodity name, North Korean language panel, and "LMR-5" only. See exhibit LMR-5, back.

Language Marking Requirement #6 (LMR-6)
FAS – Distribution for Afghanistan, with Pashtu and Dari
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USDA logo, contract number, net weight, dimensions, and "LMR-6." See exhibit LMR-6, front.
Back: USA with stripes, the commodity name, Pashtu and Dari language panel, and "LMR-6" only. See exhibit LMR-6, back.

Language Marking Requirement #7 (LMR-7)
FAS – Distribution for South Africa Region
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USDA logo, contract number, net weight, dimensions, and "LMR-7." See exhibit LMR-7, front.
Back: USA with stripes, the commodity name, English language panel, and "LMR-7" only. See exhibit LMR-7, back.

Language Marking Requirement #8 (LMR-8)

FAS – Distribution for Iraq with Arabic
Front: USA with stripes, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USDA logo, contract number, net weight, dimensions, and "LMR-8." See exhibit LMR-8, front
Back: USA with stripes, the commodity name, Arabic language panel, and "LMR-8" only. See exhibit LMR-8, back.

Section 3.3 EMPTY BAG DIMENSIONS

A. All bags shall be marked with the empty dimensions as follows:

Gusseted Bags	Face Width X Gusseted Width X Finished Length
Flat Tube Bags	Face Width X Finished Length

B. The bag dimensions shall be centered at the bottom of the bag, as small as possible, yet legible.

Section 3.4 CONTAINERS WITH INCORRECT MARKINGS

A. Any labels, bags, cans, can lids, cases, or any other type of packaging (hereinafter referred to as "containers") displaying incorrect markings may be used under a Government contract provided that the incorrect markings are obliterated and correct markings are applied in a permanent manner with approval of the contracting officer.

B. The appearance of containers in commercial or other channels either filled or unfilled bearing markings identifying the containers as part of a Government contract may cause the Government expense in determining whether commodities have been diverted from authorized use and in answering inquiries. The contractor shall take all necessary action to prevent the appearance in commercial or other channels of containers and container materials bearing any markings required under a Government contract, including those held by the contractor or others; e.g., overruns, misprints, etc. The contractor shall ensure that any container from a Government contract that appears in commercial or other channels shall have all markings required under this contract permanently obliterated.

SMR-1 FRONT USAID - Distribution (Feb. 2005)

SMR-1 BACK USAID - Distribution (Feb. 2005)


USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
SMR-2
USA


USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
SMR-2
USA

USA

WHEAT SOY BLEND

USAID

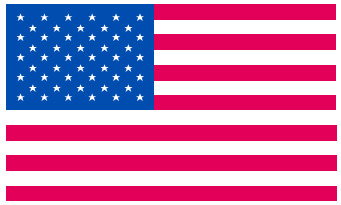
CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

SMR-3

USA



WHEAT SOY BLEND

USAID

CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

SMR-3

USA

SMR-4 FRONT Monetization (Feb. 2005)

SMR-4 BACK Monetization (Feb. 2005)

USA

WHEAT SOY BLEND

NOT TO BE SOLD OR EXCHANGED

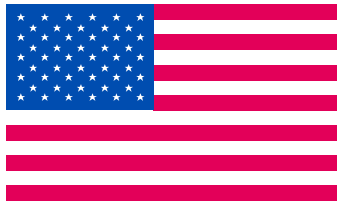
CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

LMR-1

USA



WHEAT SOY BLEND

미국에서

보내온 선물

LMR-1

USA

USA

WHEAT SOY BLEND

NOT TO BE SOLD OR EXCHANGED

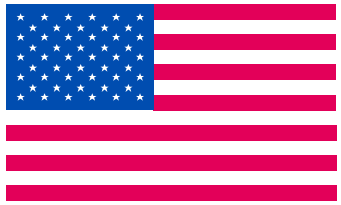
CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

LMR-2

USA



WHEAT SOY BLEND

د امریکا د متحده ایالاتو

د خلکو سوغات

تحفهء مردم

ایالات متحده امریکا

LMR-2

USA

USA

WHEAT SOY BLEND

NOT TO BE SOLD OR EXCHANGED

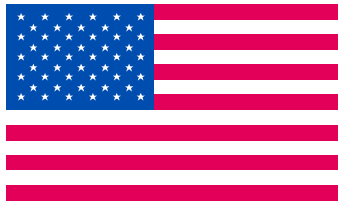
CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

LMR-3

USA



WHEAT SOY BLEND

Gift of the People of the
United States of America

LMR-3

USA

USA

WHEAT SOY BLEND

NOT TO BE SOLD OR EXCHANGED

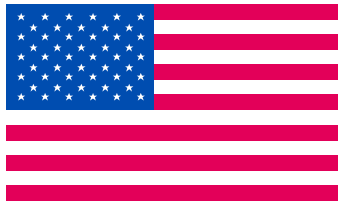
CONTRACT ABCD01234

NET WEIGHT: 25 kg, 55.115 lb.

16 x 4 x 37

LMR-4

USA



WHEAT SOY BLEND

هدية من
الشعب الأميركي

LMR-4

USA


USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
LMR-5

USA


USA
WHEAT SOY BLEND
미국에서
보내온 선물
LMR-5


USA


USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
LMR-6

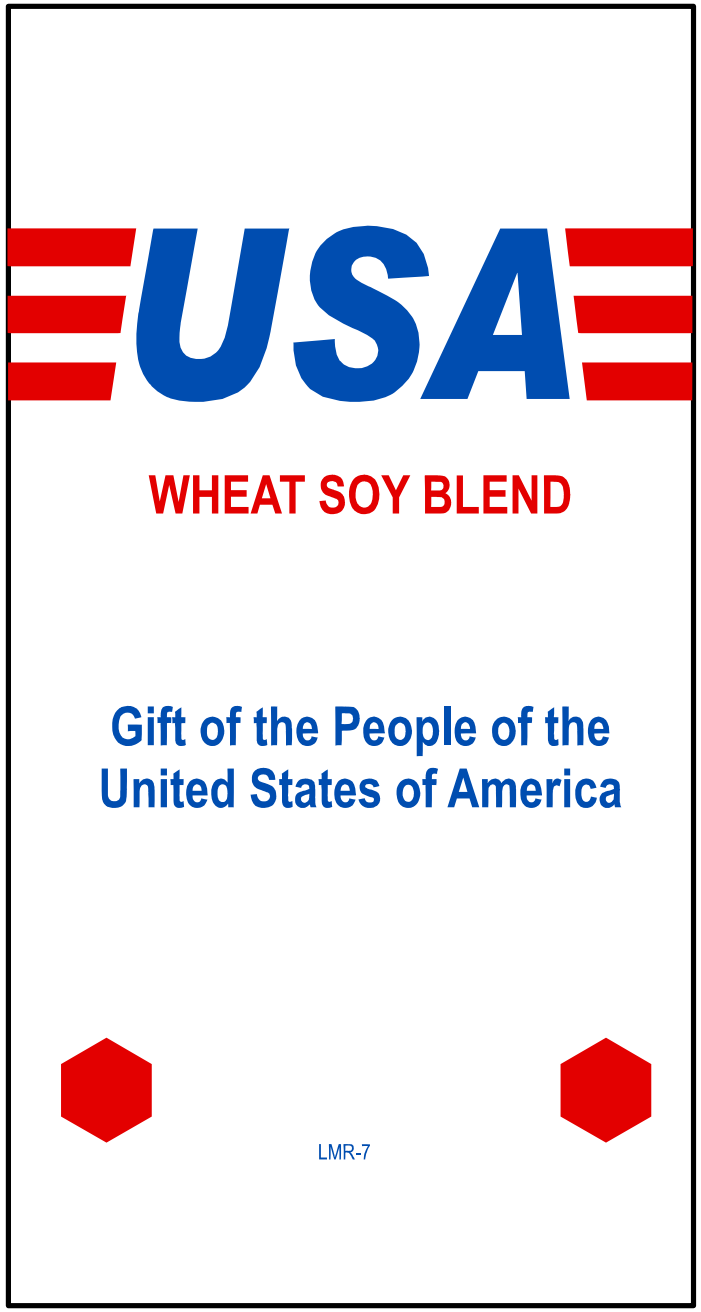
USA


USA
WHEAT SOY BLEND
د امریکا د متحده ایالاتو
د خلکو سوغات
تحفهء مردم
ایالات متحده امریکا
LMR-6


USA


USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
LMR-7

USA


USA
WHEAT SOY BLEND
Gift of the People of the
United States of America
LMR-7


USA

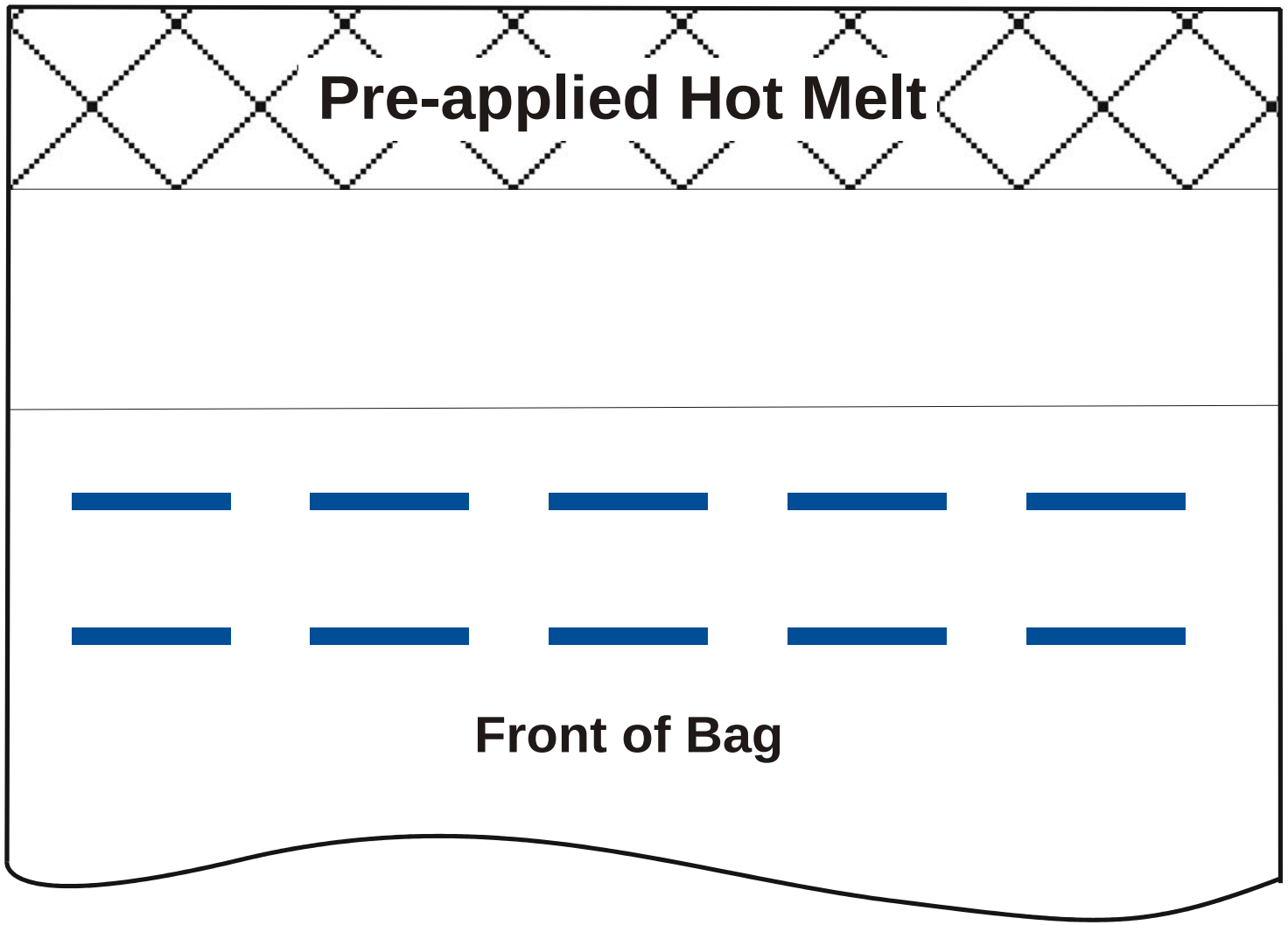

USA
WHEAT SOY BLEND
NOT TO BE SOLD OR EXCHANGED
USDA
CONTRACT ABCD01234
NET WEIGHT: 25 kg, 55.115 lb.
16 x 4 x 37
LMR-8


USA


USA
WHEAT SOY BLEND
هدية من
الشعب الأمريكي
LMR-8


USA

Bag Closure Guide Location



High Performance Bags:

1 inch blue stripe