## USDA COMMODITY REQUIREMENTS

## SFCM1 SOY FORTIFIED CORNMEAL FOR USE IN EXPORT PROGRAMS

Effective Date: 09/01/05

## USDA COMMODITIY REQUIREMENTS SFCM1 SOY FORTIFIED CORNMEAL FOR USE IN EXPORT PROGRAMS

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## Part 1 COMMODITY SPECIFICATIONS

#### Section 1.1 COMMODITIES

- A. Quality of Soy Fortified Cornmeal
  - Corn shall be sampled and tested for the Cry 9C protein pursuant to Food and Drug Administration (FDA) guidelines, and such test results shall be negative.
  - (2) Corn shall be tested for aflatoxin in accordance with procedures approved by Federal Grain Inspection Service (FGIS). If the aflatoxin test proves positive, a quantitative test shall be performed. If the result of the quantitative test exceeds 20 p.p.b., the corn shall not be used in the production of the commodity.
  - (3) The soy fortified cornmeal will be a product of small particle size that is usable as a dietary supplement or as an extender to other foods, and it shall conform to the following chemical and physical requirements in the table below:

| SOT FORTIFIED CORNIN   |                                  | 4     |  |
|--|----------------------------------|-------|--|
| ITEM   | <b>Requirements</b> <sup>1</sup> |       |  |
|  | Min.                             | Max.  |  |
| Moisture   |                                  | 13.0% |  |
| Protein (Nx6.25) <sup>1</sup>                                      | 13.0%                            |       |  |
| Fat <sup>1</sup>   |                                  | 1.5%  |  |
| Crude Fiber <sup>1</sup>   |                                  | 2.0%  |  |
| Material Through a U.S. Standard No. 20 Woven-<br>Wire-Cloth Sieve | 99.0%                            |       |  |
| Material Through a U.S. Standard No. 25 Woven-<br>Wire-Cloth Sieve | 91.0%                            |       |  |
| Material Through a U.S. Standard No. 45 Woven-<br>Wire-Cloth Sieve | 40.0%                            |       |  |
| Material Through a U.S. Standard No. 80 Woven-<br>Wire-Cloth Sieve |                                  | 32.0% |  |

#### SOY FORTIFIED CORNMEAL

Maximum Ash Allowable Without Discount

at Specified Calcium Levels<sup>2</sup>

| at Speemea Galeran Devels |                        |                   |                        |                   |                        |  |
|---------------------------|------------------------|-------------------|------------------------|-------------------|------------------------|--|
| Calcium<br>Mg/lb.         | Maximum<br>Ash Percent | Calcium<br>Mg/lb. | Maximum<br>Ash Percent | Calcium<br>Mg/lb. | Maximum<br>Ash Percent |  |
| 340-358                   | 1.78                   | 649-666           | 1.95                   | 957-974           | 2.12                   |  |
| 359-376                   | 1.79                   | 667-684           | 1.96                   | 975-993           | 2.13                   |  |
| 377-394                   | 1.80                   | 685-702           | 1.97                   | 994-1011          | 2.14                   |  |
| 395-412                   | 1.81                   | 703-720           | 1.98                   | 1012-1029         | 2.15                   |  |
| 413-430                   | 1.82                   | 721-739           | 1.99                   | 1030-1047         | 2.16                   |  |
| 431-448                   | 1.83                   | 740-757           | 2.00                   | 1048-1065         | 2.17                   |  |
| 449-466                   | 1.84                   | 758-775           | 2.01                   | 1066-1083         | 2.18                   |  |

<sup>1</sup> Moisture-free basis.

 $^2$  Soy fortified commeal prior to calcium enrichment shall not have an ash content exceeding 1.60% on a moisture-free basis.

| at Specified Calcium Levels |      |         |      |           |      |  |  |
|-----------------------------|------|---------|------|-----------|------|--|--|
| 467-485                     | 1.85 | 776-793 | 2.02 | 1084-1101 | 2.19 |  |  |
| 486-503                     | 1.86 | 794-811 | 2.03 | 1102-1120 | 2.20 |  |  |
| 504-521                     | 1.87 | 812-829 | 2.04 | 1121-1138 | 2.21 |  |  |
| 522-539                     | 1.88 | 830-847 | 2.05 | 1139-1156 | 2.22 |  |  |
| 540-557                     | 1.89 | 848-866 | 2.06 | 1157-1174 | 2.23 |  |  |
| 558-575                     | 1.90 | 867-884 | 2.07 | 1175-1192 | 2.24 |  |  |
| 576-593                     | 1.91 | 885-902 | 2.08 | 1193-1210 | 2.25 |  |  |
| 594-612                     | 1.92 | 903-920 | 2.09 | 1211-1228 | 2.26 |  |  |
| 613-630                     | 1.93 | 921-938 | 2.10 | 1229-1247 | 2.27 |  |  |
| 631-648                     | 1.94 | 939-956 | 2.11 |           |      |  |  |

#### Maximum Ash Allowable Without Discount at Specified Calcium Levels<sup>2</sup>

#### B. Product Enrichment Requirements

The product shall be blended thoroughly and homogeneously mixed with the listed enrichment ingredients in the following proportions:

| Ingredient   | Minimum      | Maximum    |  |  |
|--|--------------|------------|--|--|
| Thiamine   | 2.0 mg/lb    | 3.0 mg/lb  |  |  |
| Riboflavin   | 1.2 mg/lb    | 1.8 mg/lb  |  |  |
| Niacin or niacinamide  | 16.0 mg/lb   | 24.0 mg/lb |  |  |
| Iron   | 13.0 mg/lb   | 26.0 mg/lb |  |  |
| Calcium (in harmless and assimilable form)   | 500 mg/lb    | 750 mg/lb  |  |  |
| Vitamin A Palmitate <sup>3</sup>   | 10,000 IU/lb |            |  |  |
| For reduced iron, 325 mesh is to be used as the iron source. Ferrous sulfate is not to be used as the iron source in any processed cereal products purchased for export assistance programs. |              |            |  |  |

- (1) When used for fortifying soy fortified cornmeal at the level of 10,000 or more, the Vitamin A Palmitate preparation shall not contribute any offflavor or odor to the dry mix, or to the cooked products prepared from the fortified meal.
- (2) The Vitamin A shall have been tested by the vitamin manufacturers in cornmeal or wheat flour having moisture content in the range of 13.5 to 14.0 percent to assure stability of the vitamin.
- (3) If cornmeal is used for the stability test, the cornmeal used shall be enriched degermed yellow cornmeal, fine granulation, conforming to requirements of the latest revisions and amendments for Commercial Item Description A-A-20066A (August 14, 2002) at <u>http://www.ams.usda.gov/fqa/aa20066A.htm</u> for Type III, Class B,

<sup>&</sup>lt;sup>3</sup> 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 ant 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 8,800 IU/lb in cornmeal or wheat flour having a moisture content in the range of 13.5 to 14.5 percent.

| Ingredient                                 | Minimum    | Maximum    |
|--|------------|------------|
| Thiamine                                   | 2.0 mg/lb  | 3.0 mg/lb  |
| Riboflavin                                 | 1.2 mg/lb  | 1.8 mg/lb  |
| Niacin or niacinamide                      | 16.0 mg/lb | 24.0 mg/lb |
| Iron                                       | 13.0 mg/lb | 26.0 mg/lb |
| Calcium (in harmless and assimilable form) | 500 mg/lb  | 750 mg/lb  |

Granulation c. The cornmeal shall be enriched to contain the following:

(4) If wheat flour is used for the stability test the flour shall be of 65 to 75 percent extraction, and shall be enriched to contain the following:

| Ingredient | Minimum    | Maximum    |
|------------|------------|------------|
| Thiamine   | 2.0 mg/lb  | 2.5 mg/lb  |
| Riboflavin | 1.2 mg/lb  | 1.5 mg/lb  |
| Niacin     | 16.0 mg/lb | 20.0 mg/lb |
| Iron       | 13.0 mg/lb | 16.5 mg/lb |

- (5) The cornmeal or wheat flour shall be fortified with the Vitamin A Palmitate preparation to be tested to the level of 10,000 or more, first preparing a premix with the cornmeal or flour to contain about 500,000 IU/lb, blending this thoroughly, then mixing into the balance of the cornmeal or flour and blending thoroughly. The fortified cornmeal or wheat flour will be stored in an 8 ounce, round glass bottles approximately 2 ¼ x 5 inches tall provided with plastic screw caps having polyvinyl liners with pulp packing. Between 110 and 120 grams of fortified cornmeal or wheat flour are placed in each bottle, leaving about one inch head space, the lids are tightened, and the upper portion of the bottle and the complete lid are coated with paraffin by inverting and dipping in a bath of melted wax to prevent moisture loss.
- (6) Bottles are stored at 45° C for 21 days, and assayed for Vitamin A, using minimum sample size of 25 grams for each determination. Loss is determined by assaying in duplicate three bottles of cornmeal or wheat flour before and after storage.
- (7) Analysis of concentrates and of original and stored blends shall be carried out by the following method: Carr-Price blue color method, "Methods of Vitamin Assay, Association of Vitamin Chemists, Inc.," Interscience Publishers, Inc., New York, (1951).
- (8) A given lot of Vitamin A does not require retesting unless its potency as determined by the USP XVII analytical procedure has fallen below the manufacturer's label claim for the product.

#### C. Proportions

The ingredients of the product shall be in the following proportions:

| Ingredients | Pounds per 2,000 lb. Batch |
|-------------|----------------------------|
|             |                            |

| Cornmeal, Degermed            | 1,700 |
|-------------------------------|-------|
| Soy flour, Defatted (toasted) | 300   |

#### D. Ingredient Specifications

- The cornmeal delivered shall be degermed and meet the requirements of the latest revisions and amendments for Commercial Item Description A-A-20066A (August 14, 2002) at <u>http://www.ams.usda.gov/fqa/aa20066A.htm</u>, except chemical and physical requirements listed in the previous table, which shall take precedence where they are different from those contained in the Commercial Item Description.
- (2) The degermed cornmeal shall be Type III, Class B, Granulation c, Color 2. In addition to the enrichment ingredients contained in the Commercial Item Description, calcium and Vitamin A Palmitate shall be added as shown in the previous table.
- (3) The soy four, defatted (toasted) shall 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.

| SOY FLOUR                            |                                     |           |                                  |  |  |  |
|--------------------------------------|-------------------------------------|-----------|----------------------------------|--|--|--|
| ITEM                                 |                                     | Require   | <b>Requirements</b> <sup>4</sup> |  |  |  |
| IIENI                                |                                     | Min. Max. |                                  |  |  |  |
| Moisture                             |                                     |           | 10.0%                            |  |  |  |
| Protein (Na                          | x6.25) <sup>4</sup>                 | 50.0%     |                                  |  |  |  |
| Fat <sup>4</sup>                     |                                     | 0.6%      |                                  |  |  |  |
| Fiber <sup>4</sup>                   |                                     |           | 3.5%                             |  |  |  |
| Ash <sup>4</sup>                     |                                     |           | 6.5%                             |  |  |  |
| Material Through a U.S. Standard 100 |                                     | 95.0%     |                                  |  |  |  |
| Woven-Wi                             | re-Cloth Sieve                      |           |                                  |  |  |  |
| Nitrogen S                           | olubility, increase in pH           | 10.0      | 30.0                             |  |  |  |
| Urease acti                          | vity, increase in pH                | 0.05      | 0.15                             |  |  |  |
| Total bacte                          | eria count, per gram                |           | 50,000                           |  |  |  |
| Color                                | Light yellow to golden buff         | ·         |                                  |  |  |  |
| Odor                                 | Neutral to nutty                    |           |                                  |  |  |  |
| Taste                                | Pleasant, neutral to slightly nutty | 7         |                                  |  |  |  |
| Texture                              | A homogeneous flour                 |           |                                  |  |  |  |

#### Section 1.2 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

<sup>&</sup>lt;sup>4</sup>.Moisture-free basis

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 1.3 QUALITY DISCOUNTS

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 shall be reduced in accordance with the following schedule of discounts for each 100 pounds of commodity delivered:

| Soy For the Commean Discounts     |          |                                      |        |  |  |
|-----------------------------------|----------|--------------------------------------|--------|--|--|
| Excess Moisture                   |          | Excess Fat                           |        |  |  |
| 13.1% or 13.2%                    | \$0.10   | 1.6% or 1.7%                         | \$0.10 |  |  |
| 13.3% or 13.4%                    | \$0.20   | 1.8% or 1.9%                         | \$0.20 |  |  |
| 13.5%                             | \$0.35   | 2.0%                                 | \$0.35 |  |  |
| Excess Crude Fiber                |          | Deficient Protein Percent            |        |  |  |
| 2.1% or 2.2%                      | \$0.10   | 12.9% or 12.8%                       | \$0.10 |  |  |
| 2.3% or 2.4%                      | \$0.20   | 12.7% or 12.6%                       | \$0.20 |  |  |
| 2.5%                              | \$0.35   | 12.5%                                | \$0.35 |  |  |
| Deficient Granulation Through No. | 20 Sieve | Deficient Granulation Through No. 25 | Sieve  |  |  |
| 98.0% or 97.0%                    | \$0.10   | 90.0% or 89.0%                       | \$0.10 |  |  |
| 96.0% or 95.0%                    | \$0.20   | 88.0% or 87.0%                       | \$0.20 |  |  |
| 94.0% or 93.0%                    | \$0.35   | 86.0% or 85.0%                       | \$0.35 |  |  |
| Excess Granulation Through No. 8  | 0 Sieve  | Excess Granulation Through No. 45 Si | ieve   |  |  |
| 33.0% or 34.0%                    | \$0.10   | 39.0% or 38.0%                       | \$0.10 |  |  |
| 35.0% or 36.0%                    | \$0.20   | 37.0% or 36.0%                       | \$0.20 |  |  |
| 37.0% or 38.0%                    | \$0.35   | 35.0% or 34.0%                       | \$0.35 |  |  |
|                                   |          |                                      |        |  |  |

Soy Fortified Cornmeal Discounts

Soy Fortified Cornmeal Discounts for Excess Ash, Deficient and Excess Calcium

| Excess Ash Percentage<br>Points Above Max. |        | Deficient Ca          | lcium  | Excess Calc     | ium   |
|--|--------|-----------------------|--------|-----------------|-------|
| .01 or .02                                 | \$0.10 | 499-440 mg/lb. \$0.05 |        | 750-1247 mg/lb. | \$0.0 |
| .03 or .04                                 | \$0.20 | 439-400 mg/lb.        | \$0.10 |                 |       |
| .05  | \$0.35 | 399-340 mg/lb.        | \$0.20 |                 |       |

## 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°C and not subject to reblock at 70°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°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 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:
  - 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 heatsealed 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°F plus or minus 1.8°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. <u>Test Laboratories</u>

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

| Michigan State University<br>School of Packaging<br>East Lansing, MI 48824-1223<br>(517) 355-9580<br><u>http://packaging.msu.edu/</u> | Lansmont Corporation<br>1287 Reamwood<br>Sunnyvale, CA 94089<br>(408) 734-9724<br>Lansmont Corporation<br>6539 Westland Way, Suite 24<br>Lansing, MI 48917<br>(888) 526-7666<br>www.lansmont.com |
|---|--|
| Rutgers University<br>Packaging Science and<br>Engineering Dept.<br>P.O. Box 909<br>Piscataway, NJ 08854<br>(201) 932-3679            | Ten-E Packaging Services, Inc.<br>1666 County Road 74<br>Newport, MN 55055<br>(651) 459-0671<br><u>www.ten-e.com</u>   |

#### 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 shall 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.

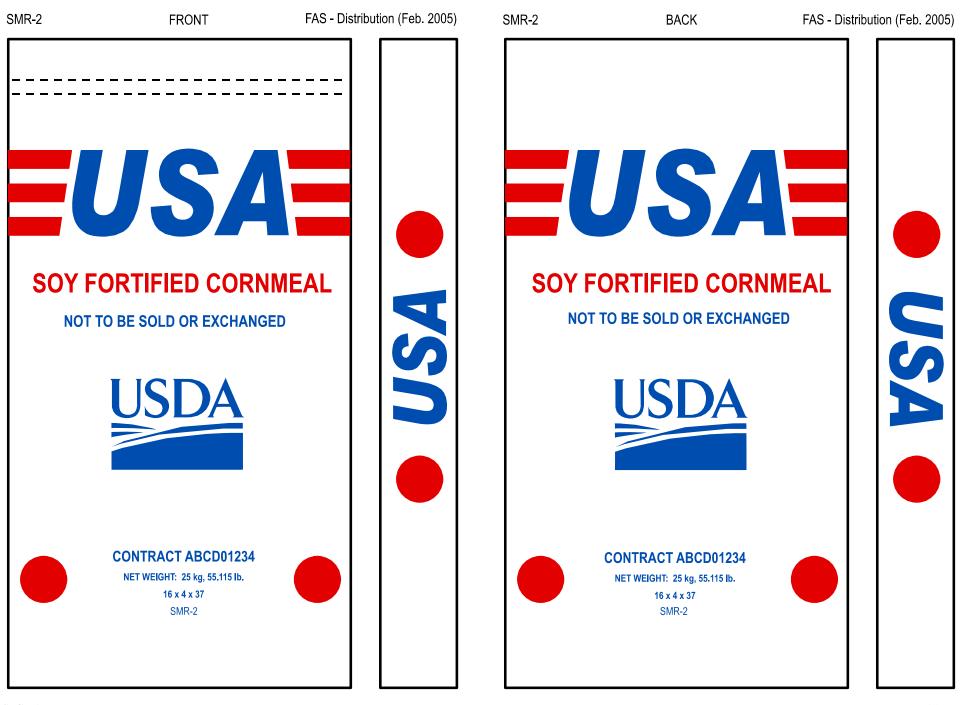
#### Section 3.4 CONTAINERS WITH INCORRECT MARKINGS

- 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.

Marking Exhibits







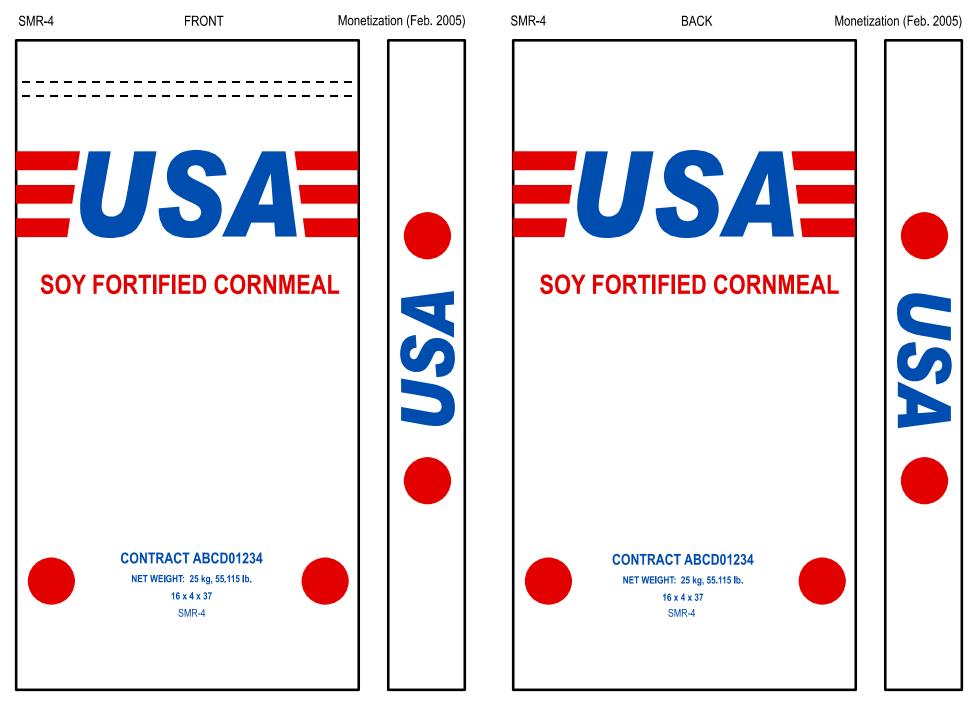


















Exhibit A

## **Bag Closure Guide Location**

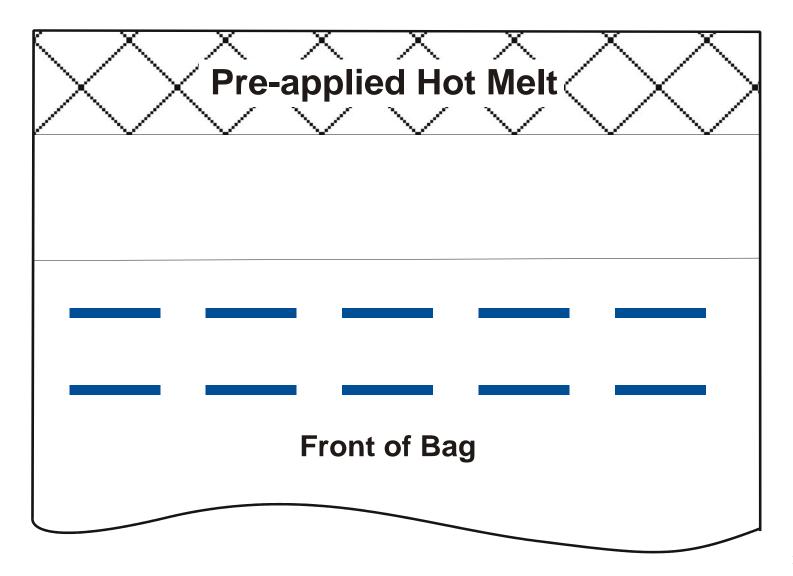


Exhibit B

