

**USDA COMMODITY REQUIREMENTS**

**ICSB1  
INSTANT CORN-SOY BLEND  
FOR USE IN EXPORT PROGRAMS**

Effective Date: **12/28/2010**

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## **Part 1 Commodity Specifications**

### **Section 1.1 Instant Corn-Soy Blend Commodity Specifications**

#### **A. Quality of Instant Corn-Soy Blend**

- (1) 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.
- (2) The term “instant” is only used to describe food that is ready-to-eat, and quickly and easily prepared.

#### **B. Finished Product Requirements**

- (1) Each 100 gram finished product serving size shall have a uniform distribution of vitamins and minerals in each serving. This uniformity will be established by product testing showing that the product meets the specifications for Vitamin A and Iron listed in the table at B(7) below.
- (2) The finished product may be consumed alone or as an ingredient in any number of recipes that would otherwise utilize regular cornmeal as a component in the finished meal.
- (3) Finished product shall be manufactured to produce a safe, nutritious, fully-cooked end item, with a neutral to slightly nutty flavor, light yellow to golden buff color.
- (4) Finished product shall contain only degerminated yellow cornmeal, defatted soy flour, vegetable oil (as specified) and a vitamin/mineral premix at levels required to achieve the specified product characteristics defined in Section 1.1.B(7).
- (5) No alternate ingredients, hulls, corn germ or byproducts are permitted in this formulation.
- (6) Fully cooked shall mean that the finished product shall be sufficiently heat treated to deliver a food that is not potentially hazardous.
- (7) The product shall be essentially free from foreign material and shall have a good characteristic taste and odor, free from rancid, bitter, musty, sour, and other undesirable or foreign tastes and odors. The product shall be of small particle size suitable for use as a dietary supplement for emergency rations, displaced persons assistance, infants and children for serving as a porridge, gruel, or as an extender to other foods. It is composed of degerminated yellow cornmeal, defatted soy flour (toasted), soybean oil (refined, deodorized, bleached) and a mineral and vitamin premix. The finished product shall be manufactured to produce a safe,

nutritious, fully cooked end item with a neutral to slightly nutty flavor, light yellow to golden buff in color and meet the following requirements:

<b>INSTANT CORN-SOY BLEND</b>		
<b>Item</b>	<b>Requirements<sup>1</sup></b>	
	<b>Minimum</b>	<b>Maximum</b>
Moisture	---	8.0%
Protein (Nx6.25)	16.7%	---
Fat <sup>2</sup>	6.0%	---
Vitamin A	8400 IU/lb	16,000 IU/lb
Iron	14.7 mg/100g	30.0 mg/100g
Crude Fiber	---	2.0%
Material Through a U.S. Standard No. 30 Woven-Wire-Cloth Sieve	---	92.0%
Material Through a U.S. Standard No. 60 Woven-Wire-Cloth Sieve	---	57.0%
Consistency (Bostwick value) cooked, 20% gruel, weight/weight as is basis <sup>3</sup>	9.0 cm	21.0 cm
Total bacteria count per gram	---	10,000
Salmonella, E. Coli and Coagulase Positive Staphylococci shall be negative. Dispersibility – shall be essentially free from lumping or balling when mixed with water.		

C. Methods of Analyses

Special tests are included in the specifications given herein.

- (1) Consistency (Bostwick value) for cooked product 20.0 percent gruel for instant corn-soy blend.

a. Apparatus

- (i) 1 - 400 ml. Pyrex beaker
- (ii) 1 - stainless steel kitchen fork
- (iii) 1 - 30°C water bath
- (iv) 1 - consistometer, Cenco-Bostwick, Central Scientific Stock No. 24925

b. Method

Place 175 grams of boiling water in the 400 ml. beaker, cover with watch glass, and bring to boiling on an electrically heated hot plate with surface temperature 600° - 650°F. Gradually add 23.5 grams of the commodity to be tested, while stirring vigorously with the fork. Bring to boiling and boil for 2 minutes while stirring vigorously with fork.

<sup>1</sup> Unless otherwise specified analyses are expressed on a moisture-free basis. For methods of analyses see Section 1.1.C.

<sup>2</sup> See Section 1.1.D.

<sup>3</sup> Reported to the nearest half of Bostwick unit.

Remove from the hot plate and stir 1/2-minute.

Place the cooked slurry in the 30°C water bath and hold there for 10 minutes. Place on the scale and add water lost by evaporation so that total slurry weight is now 200 grams. Stir 25 times with the fork. Place cooked slurry in the 30°C water bath and hold there for 1-hour. Remove from the bath and pour into the reservoir of the Bostwick consistometer until it is filled higher than its top level. Strike off the excess with a straight edge. Allow the cooked slurry to rest for 30 seconds. Trip the release lever of the consistometer and read the Bostwick value after exactly 1-minute.

(2) Consistency for ingredient specification cornmeal, processed (gelatinized).

a. Apparatus

- (i) 1 - 800 ml. Pyrex beaker
- (ii) 1 - wooden-handled spatula with a 5-inch stainless steel blade
- (iii) 1 - cylindrical open-bottom container, i.e., a 3-inch long section of seamless steel tubing 3.0-inch o.d. and 2.87 inch i.d.
- (iv) 1 - glass plate 10 by 10 inches
- (v) 1 - paper measuring scale, 10 by 10 inches containing a drawn 3-inch diameter center circle and concentric circles drawn of increasing diameter every one inch. Space between circles is divided to indicate each 1/4-inch diameter.

b. Method

Place 400 ml. of water at 25°C in an 800 ml. glass beaker. Gradually add 125 g. of the gelatinized (processed) cornmeal while stirring vigorously with a wooden-handled spatula with a 5-inch stainless steel blade. Then stir<sup>4</sup> gently for 3 minutes using a spatula to smooth any lumps that may form. Allow the slurry to stand an additional 2 minutes for hydration. Then stir<sup>4</sup> gently for about 10 seconds with the spatula. Place a glass plate over a paper measuring scale and center the cylindrical container over the scale. Transfer the slurry to the retaining cup which is resting in the vertical position on the flat glass plate. Transfer the slurry until the cup is filled higher than its top level. Strike off the excess with a straight edge. Allow the slurry to rest for 30 seconds. Then remove the cup from the glass plate with a vertical pull, avoiding lateral motion. Allow the cup to drain onto the patty for 10 seconds. After waiting 1-minute for the size of the patty to reach equilibrium, read its diameter to the nearest 1/8-inch, as shown on the scaled sheet of paper underneath the glass.

(3) Test Result Precision

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<sup>4</sup> Mixing may be done using a Hobart Model N-50, slow speed; or equipment giving equivalent results.

Report all percentages on a weight basis. Results for moisture, protein (N x 6.25), fat, crude fiber and particle size shall be reported to the nearest 0.1 percent. Bostwick consistency measurements shall be reported to the nearest 0.5 cm. Test results for iron shall be reported to the nearest 0.1 mg/100 g product. Vitamin A palmitate shall be to the whole number per pound of product. Aerobic plate count shall be reported to two (2) significant digits. *Staphylococcus aureus*, coagulase positive, *E. coli*, and *salmonella* should be reported as ‘negative’ (or ‘positive’) to test’. Calcium and salt, if added as separate ingredients, shall be reported to the nearest 1 mg/100 g product.

- (4) Performance  
For each 100 gram serving size, there shall be a uniform distribution of vitamins and minerals in each serving. Instant CSB shall be manufactured to produce a safe, nutritious, fully-cooked end item, and shall be manufactured and nutritionally labeled in accordance with all applicable Food and Drug Administration regulations.

D. Manufacturers Requirements

Instant Corn-soy blend shall contain only degerminated yellow cornmeal, defatted, toasted soy flour, stabilized vegetable oil and vitamin and mineral premixes at levels required to achieve the specified product characteristics defined in Section 1.1.B(7) and shall be a fully cooked end item produced in accordance with good manufacturing practices.

- (1) No alternate ingredients, hulls, byproducts or corn germ shall be permitted in this formulation.
- (2) Proportions  
The ingredients of the product shall be in the following proportions:

<b>Ingredients</b>	<b>Pounds per 2,000-lb. Batch</b>
Cornmeal, processed gelatinized	1,391
Soy flour, defatted (toasted)	437
Minerals	60
Vitamin Antioxidant Premix	2
Soybean oil, refined, deodorized, stabilized <sup>5</sup>	110

- (3) Ingredient Specifications
  - a Cornmeal, Processed (Gelatinized)
    - (i) Material and Processing  
The cornmeal processed (gelatinized) shall be prepared from shelled yellow corn that has been dehulled and degermed. The

<sup>5</sup> The stabilized oil may be added to the mix in order to obtain the required minimum fat level of 6.0 percent in the blend.

Any combination of footnotes may be used to obtain desired result.

corn used shall be clean, sound, and essentially free from other grains, weed seeds, and other foreign material. It shall be free of rancid, bitter, musty, sour, and other undesirable or foreign tastes and odors. The processed cornmeal shall be produced from yellow corn, as defined in the "Official United States Standards for Grain," found at

<http://www.gipsa.usda.gov/GIPSA/webapp?area=home&subject=grpi&topic=sq-ous>, in effect at the time the applicable solicitation for offers is issued, using the conventional corn dry-milling process.

The item shall be fully cooked and processed in a way that yields a product meeting all the finished processed instant corn-soy blend criteria. No alternate ingredients, byproducts or corn germ shall be permitted in this formulation.

b Analysis

The cornmeal, processed (gelatinized) shall conform with the following detailed requirements:

**CORNMEAL**

ITEM	Requirements <sup>6</sup>	
	Min.	Max.
Moisture	---	11.0%
Ash <sup>7</sup>	---	1.25%
Material Through a U.S. Standard No. 60 Woven-Wire-Cloth Sieve	---	35.0%
Consistency (inches)	4.5	8.5
Total bacteria count, per gram	---	10,000

(4) Soy Flour, Defatted (Toasted)

a. Material and Processing

Soy flour, 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.

b. Analysis

The soy flour, defatted (toasted) shall conform to the following detailed requirements:

<sup>6</sup> For methods of analyses see Section 1.1.B.

<sup>7</sup> Moisture-free basis.

**SOY FLOUR**

ITEM	Requirements <sup>8</sup>	
	Min.	Max.
Moisture	---	10.0%
Protein (Nx6.25) <sup>9</sup>	50.0%	---
Fat <sup>9 10</sup>	---	1.0
Crude Fiber <sup>9</sup>	---	3.5%
Ash <sup>9</sup>	---	6.5%
Material Through a U.S. Standard 100 Woven-Wire-Cloth Sieve	95.0%	---
Nitrogen Solubility, increase in pH	10.0	30.0
Urease activity, increase in pH	0.05	0.15
Total bacteria count, per gram	---	10,000
Color	Light yellow to golden buff	
Odor	Neutral to nutty	
Taste	Pleasant, neutral to slightly nutty	
Texture	A homogeneous flour	

(5) Soybean Oil

- a. Soy oil, refined, deodorized, and stabilized, shall contain 0.005 percent citric acid added on the cooling side of deodorization. The soy oil shall comply with the requirements of the latest revisions and amendments for Commercial Item Description A-A-20091D (May 7, 2002), <http://www.ams.usda.gov/fqa/aa20091d.htm>; type IV not winterized salad oil.<sup>11</sup>
  
- b. Antioxidant may be added to either the soy oil or to the vitamin antioxidant premix, but it shall not be added to both.

<sup>8</sup> For methods of analysis see Section 1.1.B.

<sup>9</sup> Moisture-free basis.

<sup>10</sup> See Section 1.1.D.

<sup>11</sup> Analytical Data for type IV Salad Oil in Commercial Item Description A-A-20091D as follows:

- Stability, active oxygen method (AOM), PV not greater than 100 meg/kg (hours) maximum: 15 hours



(6) Mineral Premix

- a The minerals and vitamin premix shall not be combined and shall be added to the formulation separately.

The mineral premix shall contain the micronutrients listed in this Section, at the stated levels, and mineral premix identified as Option 1 shall be added to corn-soy uniformly blend at the rate of sixty (60) pounds per 2,000 pound batch of finished product in a manner that produces a finished product with a uniform distribution of minerals in each 100g serving size. The weight of other mineral premix options vary and any deviation in weight from 60 pounds shall be added or subtracted, as appropriate, from the total final product batch weight.

**Weight of Minerals per 60 pounds of Premix**

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
	lbs	lbs	lbs	lbs	lbs	lbs	lbs	Lbs
Calcium Phosphate, Tribasic	40.00			26.00	18.00	18.00		
Calcium Carbonate		36.00	36.00		12.00	12.00	10.00	10.00
Sodium Phosphate, Monobasic		32.00			16.00			
Calcium Phosphate, Dibasic				12.00				44.00
Potassium Phosphate, Monobasic			32.00			16.00		
Calcium Phosphate, Dibasic, Anhydrous							34.00	
Zinc Sulfate, Monohydrate <sup>1</sup>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Ferrous Fumarate, FCC Grade, Purified	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Magnesium Oxide (MgO)	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
Iodized Salt (0.007% I <sub>2</sub> )	16.25	16.25	16.25	16.25	16.25	16.25	16.25	16.25
Mineral Premix Total Weight, lbs	60.17	88.17	88.17	58.17	66.17	66.17	64.17	74.17
<sup>1</sup> Zinc sulfate heptahydrate (0.4 lbs) may be used as an alternative to 0.25 lbs zinc sulfate monohydrate.								

- b If calcium and phosphorus ingredients and/or salt are added independently from a mineral premix, verification of the correct addition level must be documented, by assay, on the Certificate of Analysis.

- (7) Vitamin Antioxidant Premix
- a The vitamin premix shall contain the micronutrients listed in this Section, at the stated levels, and shall be added to corn-soy blend at a balanced, uniform rate of two (2) pounds per 2,000 pound batch in a manner that assures a uniform distribution of vitamins in each 100g serving size of finished product.

**Weight of Vitamins per 2 Pounds of Premix**

<b>Vitamins</b>	<b>Grams</b>
Thiamine mononitrate	2.5
Riboflavin	3.5
Niacin	45.0
Folic Acid	1.8
Pyridoxine hydrochloride	1.5
Calcium D-pantothenate	25.0
Vitamin B <sub>12</sub>	0.012
Ascorbic Acid (Stabilized, ethyl cellulose coated) <sup>1</sup>	364
FDA Approved Antioxidant If antioxidant is added in soy oil, omit from this premix	40.0
	<b>IU</b>
Vitamin A-Palmitate (Stabilized)	21,000,000
Vitamin D (Stabilized)	1,800,000
Alpha tocopherol acetate	68,000
Carrier <sup>2</sup>	As Required to reach total weight of 2 lbs.
	<b>Lbs</b>
Vitamin Premix, Total	2.0
<sup>1</sup> Ascorbic acid (stabilized), ethyl cellulose (coated). Ascorbic acid content shall be not less than 364 g.	
<sup>2</sup> Soy flour, defatted (toasted) to reach total weight.	

Vitamin A stability testing shall be completed by the manufacturer or supplier of the vitamin premix. Manufacturers shall maintain documentation of such test results as required by the contract terms.

**Section 1.2 Quality Assurance**

A. This contract provides for Government quality assurance at source. The Government shall sample, inspect, and test the product offered in performance of the contract. The Government shall pay for the sampling and testing.

1. Sampling and testing will be performed by employees of the Department of Agriculture or contractor personnel under the direction or supervision of Government personnel. The results of Government testing shall be issued on an official Federal Grain Inspection Service (FGIS) Commodity Inspection Certificate. A FGIS Commodity Inspection Certificate is required for

invoice payment pursuant to the Invoicing Requirements clause of the contract.

2. Contractors shall provide advance notification to the appropriate FGIS field office of the scheduled production for all lots provided under the contract. The advance notification shall be sent between two and seven workdays, inclusive, prior to the start of production.

3. Pursuant to contract clause 52.246-2, Inspection of Supplies Fixed Price, Subparagraph (e)(1), if the supplies are not ready for inspection at the time specified by the contractor, the contracting officer may charge the contractor the additional cost of inspection and/or test.

4. The Government will test the finished product for the following specifications: Vitamin A, Iron, Sieving, Moisture, Protein, Fat, Crude Fiber, consistency (Bostwick value uncooked) and consistency (Bostwick value cooked)

5. The Government will test the finished product for microbiological contaminants including: Salmonella, Staphylococcus, and E. coli.

6. The Government will test the finished product for the following mycotoxin: Aflatoxin

7. The Government will determine the average net weight of the filled containers in each production lot and the net weight of the total lot in accordance with established FGIS procedures for packaged commodities.

8. The Government will verify that the packaged commodity meets the U.S. Standards for the Condition of Food Containers.

9. Sampling will be conducted pursuant to the FGIS Processed Commodities Handbook and at the rates provided for dry corn and soybeans in Handbook Section 2.3, Table No. 2. See Subparagraph B below for lot size restriction.

10. FGIS will use the following test methods:

Vitamin A	GIPSA WI: Vita3r01 Determination of Vitamin A as Retinyl Palmitate in Processed-Grain Commodities
Iron	GIPSA WI: Determination of Iron in Cereal Grains and Seed Oils by Flame AA
Sieving	GIPSA Method
Moisture	AOAC 925.10
Protein	AOAC 992.23
Fat	AOCS Am 5-04
Crude Fiber	AOCS Ba 6a-05
Consistency (Bostwick value cooked)	Part 1, Section 1.1.B of CRD CSB13
Microbiological contaminants	Standard Plate Count

Salmonella	Compendium of Methods for the Microbiological Examination of Foods, 4th Edition 2001
Staphylococcus	AOAC 2003.07
E. coli	AOAC 991.14
Aflatoxin	AOAC 991.31

Note: Any AOAC or AOCS testing method shall be as prescribed in the latest edition of the AOACs Official Methods of Analysis and AOCS Official Methods and Recommended Practices, respectively, in effect at the time of testing. The GIPSA Work Instructions for Vitamin A, Iron and Sieving are accessible at the following URL:

<http://www.gipsa.usda.gov/GIPSA/webapp?area=home&subject=grpi&topic=iws-gqt>.

11. Quality discounts as provided in Subsection 1.4 shall be applicable and assessed based on the results of the Governments testing. The Governments test results, subject to FGIS re-test and appeal process at 7 CFR 868, shall be final.

12. Any re-test or appeal requested by a contractor shall be at the contractors expense. The contractor shall submit requests for re-test or appeal in writing to both the Contracting Officers Technical Representative and the Contracting Officer listed on the contract award notification by e-mail or otherwise in writing.

13. Contractor shall provide the results of any re-test or appeal to the Contracting Officer.

14. All test results outside of the specification ranges or discount ranges will constitute non-conforming product.

15. Aflatoxin that exceeds 20 p.p.b. will result in rejection of the lot.

B. The maximum lot size shall be no more than the quantity contained in one railcar.

## **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 shall be constructed to meet the requirements of the Food and Drug Administration (FDA) for safe contact with the packaged product. 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 regulatory requirements for safe contact with food products as required in the Master Solicitation, Part 3, Section A, Number 3.

- B. Questions concerning the containers and materials should be directed to:  
USDA/FSA/DACO  
Room 5755 – South Bldg, STOP 0553  
1400 Independence Avenue SW  
Washington, DC 20250-0553  
ATTN: Packaging
- C. If the contractor purchases packaging and container ingredients from a foreign country and/or the package and container is manufactured in a foreign country, the package and container SHALL NOT display country of origin labeling. Phrases similar to but not inclusive of, “Made in [Name of Foreign Country.]” or “Product of [Name of Foreign Country.]” are strictly prohibited.

### **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<sup>o</sup> 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 °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. Review Test Laboratories  
Independent or private laboratories known to be capable of conducting the shock machine test described above are as follows:

<p>(1) Michigan State University School of Packaging East Lansing, MI 48824-1223 (517) 355-9580 <a href="http://www.packaging.msu.edu/">http://www.packaging.msu.edu/</a></p>	<p>(2) PIRA International 1287 Reamwood Sunnyvale, CA 94089 (408) 734-9724</p> <p>And:</p> <p>PIRA International 6539 Westland Way, Suite 24 Lansing, MI 48917 (517) 322-2400 <a href="http://www.pira-international.com/Home.aspx">http://www.pira-international.com/Home.aspx</a></p>
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(3) Rutgers University Center for Engineering 617 Brett Road Piscataway, NJ 08854 (732) 445-3224 <a href="http://catalogs.rutgers.edu/generated/nb-grad_0507/pg24361.html">http://catalogs.rutgers.edu/generated/nb-grad_0507/pg24361.html</a>	(4) Ten-E Packaging Services, Inc. 1666 County Road 74 Newport, MN 55055 (651) 459-0671 <a href="http://www.ten-e.com">www.ten-e.com</a>
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## 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 US Flag shall be 5 inches high and 9 inches in total width on the front and back of the applicable bag, see exhibits.
- D. 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.
- E. The USAID vertical identity, including the logo, brandname, and tagline, shall be printed in the same style as shown in the marking exhibits, sized approximately 7 1/2 inches high and 9 3/8 inches in total width. The USAID logo shall be 4 1/4 inches in diameter. The USAID brandname shall be 2 inches in height. The tagline "FROM THE AMERICAN PEOPLE" shall be 1/2 inch in height. The USAID vertical identity is available to download at <http://www.usaid.gov/branding/downloadsweb.html>.
- F. The USDA logo shall be 4 1/2 inches high and 6 1/2 inches in total width. See exhibits.
- G. 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.
- H. 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.



- 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 as shown in the 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 USAID, as shown in the applicable exhibits. The USAID identity shall be a total of 2 3/4 inches in height and 8 1/2 inches in total width and printed in both gussets. The letters “USAID” shall be 1 3/4 inches high and the tagline “FROM THE AMERICAN PEOPLE” shall be 3/8 inch high.
- L. Gussets. The geometric symbols shall appear in both gussets, adjacent to USA, as shown in the applicable exhibits. The letters USA shall be 3 inches high and printed in both gussets.
- M. 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 Markings 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: US Flag, 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: Identical to 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: US Flag, the commodity name, USAID logo, contract number, net weight, dimensions, “SMR-3”. See exhibit SMR-3, front.

Back: Identical to 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: US Flag, 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: US Flag, 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: US Flag, 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: US Flag, 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

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**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**



**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD01234**  
**NET WEIGHT: 20 kg (44.1 lb)**  
**11x4x37**  
**SMR-1**

SMR-1

BACK



**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**



**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD01234**  
**NET WEIGHT: 20 kg (44.1 lb)**  
**11x4x37**  
**SMR-1**

SMR-2

FRONT

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**USA**

**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**

**USDA**

**CONTRACT ABCD01234**  
 NET WEIGHT: 20 lb, 90.718 kg  
 18x4x27  
 SMR-2

SMR-2

BACK

**USA**

**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**

**USDA**

**CONTRACT ABCD01234**  
 NET WEIGHT: 20 lb, 90.718 kg  
 18x4x27  
 SMR-2

**USA**

**USA**

SMR-3

FRONT

INSTANT  
CORN SOY BLEND

**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD1234**  
NET WEIGHT: 28 kg, 61.19 lb.  
18 x 4 x 37  
SMR-3

SMR-3

BACK

INSTANT  
CORN SOY BLEND

**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD1234**  
NET WEIGHT: 28 kg, 61.19 lb.  
18 x 4 x 37  
SMR-3

**USAID**  
FROM THE AMERICAN PEOPLE

**USAID**  
FROM THE AMERICAN PEOPLE

SMR-4

FRONT



SMR-4

BACK





LMR-1

FRONT

The front view of the LMR-1 label features a dashed line at the top. Below it is a stylized American flag. The text "INSTANT CORN SOY BLEND" is printed in large, bold, red letters. Underneath, in smaller blue letters, is "NOT TO BE SOLD OR EXCHANGED". The USAID logo, which includes a circular seal with "UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT" and "USAID" in the center, is positioned above the word "USAID" in large blue and red letters, with "FROM THE AMERICAN PEOPLE" below it. At the bottom, the text "CONTRACT ABCDM1234" is followed by "NET WEIGHT 25 kg (55 lb)", "18x4x27", and "LMR-1". Two red diamond shapes are located at the bottom corners.

LMR-1

BACK

The back view of the LMR-1 label features a stylized American flag at the top. Below it, the text "INSTANT CORN SOY BLEND" is printed in large, bold, red letters. In the center, the Korean text "미국에서 보내온 선물" (Gift from the USA) is written in blue. The USAID logo, consisting of the word "USAID" in blue and red with "FROM THE AMERICAN PEOPLE" written vertically on either side, is positioned on the right side. At the bottom center, the text "LMR-1" is printed. Two red diamond shapes are located at the bottom corners.

LMR-2

FRONT

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**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**



**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD1234**  
NET WEIGHT: 28 kg, 62.148 lb.  
18 x 4 x 27  
LMR-2





**USAID**  
FROM THE AMERICAN PEOPLE



LMR-2

BACK



**INSTANT  
CORN SOY BLEND**

د امریکا د متحده ایالاتو  
د خلکو سوغات

تحفهء مردم  
ایالات متحده امریکا



LMR-2




**USAID**  
FROM THE AMERICAN PEOPLE



LMR-3

FRONT

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**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**



**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD1234**  
NET WEIGHT: 28 kg, 62.148 lb.  
19x4x27  
LMR-3



**USAID**  
FROM THE AMERICAN PEOPLE



LMR-3

BACK



**INSTANT  
CORN SOY BLEND**

**Gift of the People of the  
United States of America**

**LMR-3**



**USAID**  
FROM THE AMERICAN PEOPLE



LMR-4

FRONT

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**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**



**USAID**  
FROM THE AMERICAN PEOPLE

**CONTRACT ABCD1234**  
**NET WEIGHT: 28 kg, 62.174 lb.**  
**10 x 4 x 27**  
**LMR-4**



**USAID**  
FROM THE AMERICAN PEOPLE



LMR-4

BACK



**INSTANT  
CORN SOY BLEND**

هدية من  
الشعب الأمريكي

**LMR-4**



**USAID**  
FROM THE AMERICAN PEOPLE



LMR-6

FRONT

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**USA**

**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**

**USDA**

**CONTRACT ABCD1234**  
 NET WEIGHT: 20 kg, 45.194 lb.  
 10 x 4 x 27  
 LMR-6

**USA**

LMR-6

BACK

**USA**

**INSTANT  
CORN SOY BLEND**

미국에서  
보내온 선물

LMR-6

**USA**

LHR-6

FRONT

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**USA**

**INSTANT  
CORN SOY BLEND**

NOT TO BE SOLD OR EXCHANGED

**USDA**

CONTRACT ABCD1234  
NET WEIGHT: 20 kg, 45.16 lb.  
10 x 4 x 27  
LHR-6

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**USA**

LHR-6

BACK

**USA**

**INSTANT  
CORN SOY BLEND**

د امریکا د متحده ایالاتو  
د خلکو سوغات

تحفه، مردم  
ایالات متحده امریکا

LHR-6

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**USA**

LMR-7

FRONT

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**USA**

**INSTANT  
CORN SOY BLEND**

**NOT TO BE SOLD OR EXCHANGED**

**USDA**

**CONTRACT ABCD1234**  
NET WEIGHT: 20 kg, 45.114 lb.  
10 x 4 x 27  
LMR-7

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**USA**

LMR-7

BACK

**USA**

**INSTANT  
CORN SOY BLEND**

**Gift of the People of the  
United States of America**

**LMR-7**

**USA**

LMR-8

FRONT

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**INSTANT  
CORN SOY BLEND**

NOT TO BE SOLD OR EXCHANGED



**CONTRACT ABCDE1234**  
NET WEIGHT: 20 kg, 44.1 lb. N.  
1624627  
LMR-5





LMR-8

BACK



**INSTANT  
CORN SOY BLEND**

هدية من  
الشعب الأمريكي

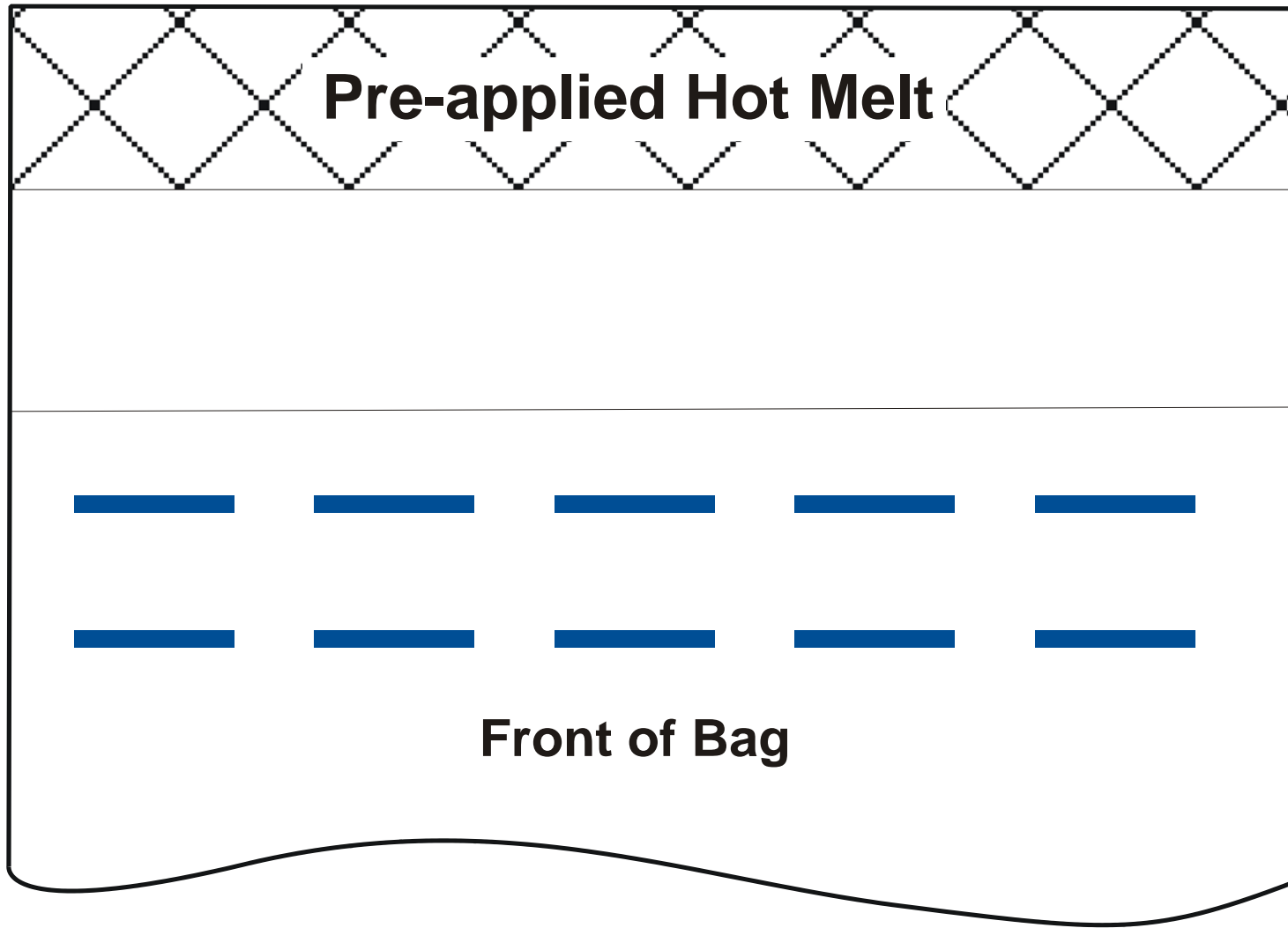


LMR-5






## Bag Closure Guide Location



**High Performance Bags:**  
1 inch blue stripe

