Farm Service Agency Kansas City Commodity Office P.O. Box 419205, MS 8698 Kansas City, MO 64141-6205

#### **USDA COMMODITY REQUIREMENTS**

# BWSF14 BULGUR / SOY FORTIFIED BULGUR FOR USE IN INTERNATIONAL FOOD AID PROGRAMS

FedBizOps Posting Date: May 1, 2013

Comments Due Date: May 15, 2013

Effective Date: July 9, 2013

# USDA COMMODITY REQUIREMENTS BWSF14 BULGUR / SOY FORTIFIED BULGUR FOR USE IN INTERNATIONAL FOOD AID PROGRAMS

#### **Table of Contents**

COMM	IODITY SPECIFICATIONS	1
1.1	BULGUR REQUIREMENTS	1
1.2	SOY-FORTIFIED BULGUR REQUIREMENTS	3
1.3	SOY-FORTIFIED BULGUR, CRACKED REQUIREMENTS	5
1.4	SOY GRITS, DEFATTED (TOASTED) OR EXPELLER	(
1.5	QUALITY ASSURANCE	7
1.6	QUALITY DISCOUNTS	8
CONTA	AINER AND PACKAGING REQUIREMENTS	9
2.1	CONTAINERS AND MATERIALS	9
2.2	50-KILOGRAM BAGS	_1(
2.3	PERFORMANCE TEST PROCEDURES	_1
2.4	TEST FREQUENCY	_12
MARK	ING REQUIREMENTS	_13
3.1	MARKINGS	_13
3.2	MARKING DESCRIPTIONS	_14
3.3	EMPTY BAG DIMENSIONS	_16
3.4	CONTAINERS WITH INCORRECT MARKINGS	177
t <b>A</b>	List of Commodity Names Printed on 50 Kilogram Woven Polypropylene Bags	_18
ts B	SMR-1 through SMR4	_19
	LMR-1 through LMR8	23
	1.1 1.2 1.3 1.4 1.5 1.6 CONTA 2.1 1.2.2 1.2.3 1.2.4 MARK 1.3.1 1.3.2 1.3.3 1.3.4 1.4 1.5 1.6 1.6 1.6 1.6 1.7 1.6 1.7 1.6 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	1.2 SOY-FORTIFIED BULGUR REQUIREMENTS 1.3 SOY-FORTIFIED BULGUR, CRACKED REQUIREMENTS 1.4 SOY GRITS, DEFATTED (TOASTED) OR EXPELLER 1.5 QUALITY ASSURANCE 1.6 QUALITY DISCOUNTS 1.6 CONTAINER AND PACKAGING REQUIREMENTS 1.7 CONTAINERS AND MATERIALS 1.8 SOY-FORTIFIED BULGUR, CRACKED REQUIREMENTS 1.9 CONTAINER AND PACKAGING REQUIREMENTS 1.0 CONTAINERS AND MATERIALS 1.1 CONTAINERS AND MATERIALS 1.2 SO-KILOGRAM BAGS 1.2 SO-KILOGRAM BAGS 1.2 PERFORMANCE TEST PROCEDURES 1.3 PERFORMANCE TEST PROCEDURES 1.3 MARKING REQUIREMENTS 1.3 MARKING DESCRIPTIONS 1.4 MARKING DESCRIPTIONS 1.5 MARKING DESCRIPTIONS 1.6 CONTAINERS WITH INCORRECT MARKINGS 1.7 List of Commodity Names Printed on 50 Kilogram Woven Polypropylene Bags 1.8 SMR-1 through SMR4

#### Part 1 COMMODITY SPECIFICATIONS

#### Section 1.1 BULGUR REQUIREMENTS

- A. The bulgur will be milled from wheat of any of the classes defined in the "Official United States Standards for Grain" except mixtures of wheat of contrasting classes. The wheat shall not contain more than 4.0 percent of damaged kernels. The grain standards are available at:

  <a href="http://www.gipsa.usda.gov/fgis/standproc/usstands.html">http://www.gipsa.usda.gov/fgis/standproc/usstands.html</a>.
- B. 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.
- C. The product shall conform to the requirements in the table below.

## Chemical and Physical Requirements<sup>1</sup> Bulgur

Item	Requirements	
	Minimum	Maximum
Moisture		11.5%
Protein (Nx5.7) <sup>2</sup>	9.3%	
Ash Content		1.8%
Crude Fiber <sup>2</sup>		2.3%
Foreign Material: Other grains except wheat		0.10%
Material except other grains <sup>3</sup>		0.10%
Scorched particles (whole or pieces of kernels)		0.20%
Ungelantized particles (whole or pieces of kernels)		1.0%
Whole processed kernels remaining on No. 8		4.0%
woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.	80.0%	
8 woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.		18.0%
14 woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.		0.9%
30 woven-wire-cloth sieve		

<sup>&</sup>lt;sup>1</sup> All percentages are on the basis of weight.

<sup>&</sup>lt;sup>2</sup> These limiting values are on a moisture-free basis.

<sup>&</sup>lt;sup>3</sup> Including grain hulls either attached or detached. However, any hulls attached to product should be detached before inclusion in the hull fraction.

#### D. Product Fortification Requirements

The product must be blended thoroughly and homogeneously mixed with the following nutrients. The finished product should meet specifications listed in the table below:

Nutrient	Required mg/100g Level*	Required mg/lb Level*	Fortificant Form
Vitamin A**	0.11 (366 IU)	0.50 (1662 IU)	Vitamin A Palmitate 250 (spray dried) <sup>4</sup>
Vitamin B1 (thiamin)	0.4	1.82	Thiamin Mononitrate
Vitamin B2 (riboflavin)	0.4	1.82	Riboflavin
Vitamin B3 (niacin)	4	18.16	Niacinamide
Vitamin B6	0.4	1.82	Pyridoxine hydrochloride
Vitamin B9 (folic acid)	0.154	0.70	Folic Acid
Vitamin B12	0.011	0.05	Vitamin B12 0.1% (water soluble)
Vitamin D3	0.002	0.009	Vitamin D3 100,000 IU/g
Iron (EDTA)**	4	18.2	NaFeEDTA
Zinc	2.4	10.9	Zinc Oxide

<sup>\*</sup>COA for premix should state expected amounts. The permitted variation in premix content is -10 to +15% for added vitamins and  $\pm$ 10% for added minerals for acceptance.

#### **Finished Product Vitamin A and Iron Ranges**

	Minimum	Maximum
Vitamin A	1662 IU/lb	
Iron	20 mg/lb	30 mg/lb

<sup>&</sup>lt;sup>4</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, and at least 45 percent through a U.S. Standard No. 100 sieve. The product shall not be 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 target level of 11,000 IU per pound in cornmeal or wheat flour having moisture content in the range of 13.5 to 14.5 percent.

<sup>\*\*</sup>Vitamin A and iron permitted variations in the finished product (i.e., including intrinsic and premix contributions) are:

# USDA

#### **United States Department of Agriculture**

#### E. Flavor Stability

- (1) When used for fortifying bulgur at the level of 1662 IU/lb, the premix containing Vitamin A Palmitate and 18.2 mg/lb of Iron shall not contribute any off-flavor or odor to the dry mix, or to the prepared cooked products.
- (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 14.5 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-20066B (June 13, 2008) at <a href="http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELDEV3006538">http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELDEV3006538</a>.
- (4) The cornmeal will be Type III, Class B, Granulation c, Color 2. The cornmeal shall be enriched to contain: 2.0 to 3.0 mg thiamine per pound; 1.2 to 1.8 mg riboflavin per pound; 16.0 to 24.0 mg niacin or niacinamide per pound; 13.0 to 26 mg iron per pound; and 500 to 750 mg calcium per pound.
- (5) 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 2.0 to 2.5 mg thiamine per pound; 1.2 to 1.5 mg riboflavin per pound; 16.0 to 20.0 mg niacin per pound; and 13.0 to 16.5 mg iron per pound.

#### Section 1.2 SOY-FORTIFIED BULGUR REQUIREMENTS

- A. The bulgur will be milled from wheat of any of the classes defined in the "Official United States Standards for Grain" except mixtures of wheat of contrasting classes. The wheat shall not contain more than 4.0 percent of damaged kernels. The grain standards are available at:

  <a href="http://www.gipsa.usda.gov/fgis/standproc/usstands.html">http://www.gipsa.usda.gov/fgis/standproc/usstands.html</a>
- B. 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.
- C. The ingredients contained in the blended product must be in the following proportions.

Ingredients	Pounds per 2,000 lb Batch
Bulgur, cracked, fortified	1,700
Soy grits, defatted (toasted) or expeller	300
Total	2,000



- (1) The soy-fortified bulgur when cooked by mixing one part by volume of the product with two parts by volume water, bringing the mixture to a boil, and boiling gently for 15 minutes, shall be distinctly particulate (individual particles which adhere together to some extent after cooking but will not disintegrate or otherwise lose their identity) but tender and palatable. It must not be ropy or gluey.
- (2) The product shall have a good characteristic taste and odor free from rancid, bitter, musty, sour, and other undesirable or foreign tastes and odors.
- D. The product shall conform to the requirements in the table below.

Chemical And Physical Requirements<sup>5</sup> Soy-Fortified Bulgur

Chemical And Physical Requirements Soy	-rorunea bi	ngui
	<b>Requirement</b> s	
Item	Minimum	Maximum
Moisture		11.5%
Protein (Nx5.7) <sup>6</sup>	17.3%	
Crude Fat <sup>6</sup>		2.6%
Crude Fiber <sup>6</sup>		2.6%
Total Bacteria Count		50,000gm
Foreign Material: Other grains except soy grits		0.10%
Materials other than cereal grains or soy grits <sup>7</sup>		0.10%
Scorched particles (whole or pieces of kernels)		0.20%
Ungelantized particles (whole or pieces of kernels)		0.90%
Whole processed kernels remaining on No. 8 woven-		3.5%
wire-cloth sieve		
Material that will pass through a U.S. Standard No. 8	81.0%	
woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.		23.0%
14 woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.		1.2%
30 woven-wire-cloth sieve		

<sup>&</sup>lt;sup>5</sup> All percentages are on the basis of weight.

<sup>&</sup>lt;sup>6</sup> These limiting values are on a moisture-free basis.

<sup>&</sup>lt;sup>7</sup> Including grain hulls either attached or detached. However, any hulls attached to product should be detached before inclusion in the hull fraction.



Micronutrient Specifications in Finished Product

Item	Requirements		
Item	Minimum	Maximum	
Vitamin A	1662 IU/lb		
Iron	27 mg/lb	41 mg/lb	

Note: The minimum and maximum levels take into account the added iron and the intrinsic levels of cereals.

E. Soy-fortified bulgur will be fortified in accordance with the requirements defined in Section 1.1.D. (same as regular bulgur)

#### Section 1.3 SOY-FORTIFIED BULGUR, CRACKED REQUIREMENTS

- A. The bulgur will be milled from wheat of any of the classes defined in the "Official United States Standards for Grain" except mixtures of wheat of contrasting classes. The grain standards are available at: <a href="http://www.gipsa.usda.gov/fgis/standproc/usstands.html">http://www.gipsa.usda.gov/fgis/standproc/usstands.html</a>.
- B. 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.
- C. The wheat must not contain more than 4.0 percent damaged kernels.
- D. The product shall conform to the requirements in the table below.

Chemical And Physical Requirements<sup>8</sup> Soy-Fortified Bulgur, Cracked

	<b>Requirement</b> s	
Item	Minimum	Maximum
Moisture		11.5%
Protein (Nx5.7) <sup>9</sup>	10.5%	
Crude Fiber		2.0%
Ash		1.8%
Foreign Material: Total		0.20%

<sup>&</sup>lt;sup>8</sup> All percentages are on the basis of weight. All analyses except moisture are expressed on a moisture-free basis.

<sup>&</sup>lt;sup>9</sup> These limiting values are on a moisture-free basis.

Chemical And Physical Requirements<sup>8</sup> Sov-Fortified Bulgur, Cracked

	Requirements	
Item	Minimum	Maximum
Material: Other than Cereal Grains		0.05%
Material except other grains <sup>10</sup>		0.10%
Scorched particles (whole and/or pieces of kernels)		0.20%
Ungelantized particles (whole and/or pieces of		1.0%
kernels)		1.0%
Whole processed kernels remaining on No. 8		4.0%
woven-wire-cloth sieve		4.070
Material that will pass through a U.S. Standard No.	80.0%	
8 woven-wire-cloth sieve		
Material that will pass through a U.S. Standard No.		23.0%
14 woven-wire-cloth sieve		23.0%
Material that will pass through a U.S. Standard No.		0.9%
30 woven-wire-cloth sieve		0.9%

#### Section 1.4 SOY GRITS, DEFATTED (TOASTED) OR EXPELLER

- A. Soy grits, defatted (toatsted) will be the screened, coarsely 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. Soy grits, expeller will be the screened, coarsely, ground product obtained from selected soybeans by cleaning, cracking, dehulling, heating, and expeller change to golden buff or tan, and cooling. The product shall conform to the requirements in the table below.

Chemical and Physical Requirements<sup>11</sup> Soy Grits, Defatted (Toasted) or Expeller

	<b>Requirement</b> s	
Item	Minimum	Maximum
Moisture		12.0%
Protein (Nx6.25)		
Crude Fat, defatted, toasted grits		1.0%
Crude Fat, expeller grits	5.0%	6.5%
Ash		7.0%
Crude Fiber		3.5%

<sup>&</sup>lt;sup>10</sup> Including grain hulls and whole or pieces of kernels of grain with the hulls attached.

<sup>&</sup>lt;sup>11</sup> All percentages are on the basis of weight. All analyses except moisture are expressed on a moisture-free basis.



#### Chemical and Physical Requirements<sup>11</sup> Soy Grits, Defatted (Toasted) or Expeller

	Requirements		
Item		Minimum	Maximum
Material that will pass through	a U.S. Standard No.	90.0%	
8 woven-wire-cloth sieve			
Material that will pass through	a U.S. Standard No.		75.0%
14 woven-wire-cloth sieve			
Material that will pass through	a U.S. Standard No.		5.0%
30 woven-wire-cloth sieve			
Nitrogen Solubility Index	10.0%	30.0%	
Urease activity increase in pH		0.05%	
Total bacteria count			50,000gm
Color, defatted, toasted grits	Light yellow to gold	len	
Color, expeller grits			
Texture	Reasonably uniform grit		
Odor	Neutral to nutty		
Taste	Pleasant, neutral to slightly nutty		

#### Section 1.5 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. The contractor will obtain a certificate of analysis from their micronutrient supplier that indicates the level and chemical form for each micronutrient in the premix. That COA will be submitted as a part of the invoice package.
- C. Contractors shall notify the Government immediately of lots that fail to meet contract requirements.
- D. 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 1.6 QUALITY DISCOUNTS**

If the product to be delivered by the contractor does not meet the quality specifications required herein 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 following schedule of discounts for each 100 pounds of commodity delivered. A commodity that deviates from the specifications will be rejected.

**Bulgur** 

<b>Deficient Protein</b>		Excess Whole Kernels	Remaining on a	
		No. 8 Sieve		
9.2% or 9.1%	\$0.10	4.1% thru 4.4%	\$0.10	
9.0% or 8.9%	\$0.20	4.5% thru 4.8%	\$0.20	
8.8%	\$0.35	4.9% or 5.0%	\$0.35	
Excess Ungelantinized	l Particles	Excess Material other	than Cereal	
		Grains		
1.1% thru 1.4%	\$0.10	0.11% thru 0.20%	\$0.25	
1.5% thru 1.8%	\$0.20			
1.9% or 2.0%	\$0.35			
Excess Ash Percentag	e Points above	<b>Excess Other Grains E</b>	xcept Wheat	
Maximum				
.01% or .02%	\$0.10	0.11% thru 0.20%	\$0.25	
.03% or .04%	\$0.20			
.05%	\$0.35			
<b>Excess Moisture</b>		Excess Crude Fiber		
11.6% or 11.7%	\$0.10	2.4% or 2.5%	\$0.10	
11.8% or 11.9%	\$0.20	2.6% thru 2.7%	\$0.20	
12.0%	\$0.35	2.8%	\$0.35	
<b>Excess Granulation T</b>	hrough a No.	Excess Scorched Partic	eles	
14 Sieve				
19.0% thru 22.0%	\$0.10	0.21% thru 0.30%	\$0.25	
23.0% thru 26.0%	\$0.20			
27.0% or 28.0%	\$0.35			
<b>Deficient Granulation</b>	Through a No.	<b>Deficient Calcium</b>		
8 Sieve				
79.0% thru 70.0%	\$0.10	499 – 440 mg/lb	\$0.05	
		439 – 400 mg/lb	\$0.10	
		399 – 340 mg/lb	\$0.20	
Deficient Granulation	Through a No.	Excess Calcium		
30 Sieve				
1.0% thru 1.5%	\$0.10	750 – 1247 mg/lb	\$0.0	
1.6%thru 2.5%	\$0.20			
2.6% thru 3.0%	\$0.35			

	G 75 4	or 1.5.1	
Soy-Forti Deficient Protein		Fired Bulgur  Excess Whole Kernels Remaining on a No. 8 Sieve	
17.0% thru 16.9%	\$0.20	4.10% thru 4.59%	\$0.20
16.8%	\$0.35	4.60% thru 5.00%	\$0.35
<b>Excess Ungelantinized Particles</b>		<b>Excess Material other than Cereal</b>	
		Grains and Soy Grits	
.91% thru 1.19%	\$0.10	0.11% thru 0.20%	\$0.25
1.20% thru 1.39%	\$0.20		<u>.</u>
1.40%	\$0.35		
Excess Ash Percentage Points above		<b>Excess Other Grains Except Wheat and</b>	
Maximum		Soy Grits – Percent	
.01% thru .02%	\$0.10	0.11 thru 0.20	\$0.25
.03% thru .04%	\$0.20		<u>.</u>
.05%	\$0.35		
Excess Moisture		Excess Crude Fiber	
11.51% thru 11.79%	\$0.10	2.61% or 2.89%	\$0.10
11.80% thru 11.99%	\$0.20	2.90% thru 3.09%	\$0.20
12.00%	\$0.35	3.10%	\$0.35
Excess Granulation Through a No. 14		Excess Crude Fat	
Sieve			
23.01% thru 26.99%	\$0.10	2.61% thru 2.89%	\$0.10
27.0% thru 29.99%	\$0.20	2.90% thru 3.09%	\$0.20
30.00% thru 32.00%	\$0.35	3.10%	\$0.35
<b>Deficient Granulation T</b>	<b>Deficient Granulation Through a No. 8</b>		
Sieve	O		
80.0% thru 79.0%	\$0.10	499 – 440 mg/lb	\$0.05
78.0% thru 77.0%	\$0.20	439 – <b>400</b> mg/lb	\$0.10
776.0%	\$0.35		1
Deficient Granulation Through a No.		Excess Calcium	
30 Sieve	S		
1.21% thru 1.89%	\$0.10	750 – 1247 mg/lb	\$0.0
1.90% thru 2.50%	\$0.20	Excess Scorched Partic	cles
	•		

0.21% thru 0.30%

\$0.25

#### Part 2 CONTAINER AND PACKAGING REQUIREMENTS

#### Section 2.1 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 0551 1400 Independence Avenue SW Washington, DC 20250-0551 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.
- D. In addition, all containers and packaging materials shall be constructed to comply with the sum concentration levels of lead, cadmium, mercury, and hexavalent chromium addressed by the Coalition of Northeast Governors (CONEG) model legislation. The sum of the concentration levels of lead, cadmium, mercury and/or hexavalent chromium present in any package or packaging component shall not exceed 100 parts per million. Concentration levels shall be determined using American Standard of Testing Materials test methods, as revised, or U.S. Environmental Protection Agency test methods for evaluating solid waste, S-W 846, as revised.

#### Section 2.2 50-KILOGRAM BAGS

Contractors may utilize woven polypropylene fabric and circular-woven style bags but are not limited to these constructions. If woven poly bags are used, the following is to apply:

- A. The color of the fabric shall be white, unless otherwise specified. At the contractor's discretion, it may use fabric containing marker yarns as a means of identifying the manufacturer of the fabric.
- B. The polymer in the fabric shall be 100 percent virgin polypropylene with no recycled material. Rework product will be limited to excess material produced during the initial extrusion process and will be limited to the amount produced during normal continuous operation. A system to identify and document this process must be in place for review by the Government's audit personnel.
- C. The fabric in an unstressed state shall permit a minimum air flow of 3 cubic feet per minute per square foot and a maximum of 30 cubic feet per minute per square foot, when tested in accordance with ASTM Test Method D737, as amended.

# USDA

#### **United States Department of Agriculture**

- D. The fabric shall be finished by coating or other suitable method to prevent slippage. Individual test results shall be 28 degrees or greater, when tested in accordance with TAPPI Test Method T-503-OM-84. The fabric shall accept and retain printing ink that will not rub or flake off to a degree where legibility is impaired.
- E. The fabric shall be capable of resisting ultraviolet deterioration for a minimum of 200 hours of exposure in a weatherometer, when tested in accordance with Test Method 5804-Federal Standard 191, as amended. The fabric shall retain 70 percent of its original minimum tensile strength in each direction, after 200 hours exposure, when tested in accordance with Test Method ASTM D 5034 (Grab Test), as amended.
- F. Bags may be flat tube or gusseted.
- G. Bags may be extrusion coated. Extrusion coated bags shall have the proper number, size and location of micro perforations to achieve the air permeability rate required for product stability and fumigation, as well as filling efficiency.
- H. Any bag seams shall be sewn in a manner which prevents the product from leaking through the seams during handling, storage, and distribution.
- I. The color of the sewing thread shall be natural or white. The tensile strength of the sewn seams shall not be less than the tensile strength of the fabric in the body of the bag.
- J. The top and bottom of the bag shall be heat cut or otherwise finished to prevent fraying or unraveling of the fabric during distribution. The bottom seam shall be constructed in accordance with Federal Standard 751a, SSn-1 Single Turnover, as amended. A minimum of 4 stitches per inch is required.

#### Section 2.3 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 come to equilibrium.
  - (4) Bags submitted under this performance specification shall conform to all other applicable material, construction, and performance specifications.



#### B. Test Laboratories

The contractor may use any independent or private laboratory that is capable of conducting the performance test for impact resistance described in Section 2.4. However, the Government is aware of only the following domestically located independent or private laboratories that have such capability:

Michigan State University School of Packaging 130 Packaging Building East Lansing, MI 48824-1223 (517) 355-9580 <a href="http://www.packaging.msu.edu/research/testing_services/">http://www.packaging.msu.edu/research/testing_services/</a>	Lansmont Corporation 17 Mandeville Court Monterey, CA 93940 (831) 655-6600 www.lansmont.com
Rutgers University Center for Packaging Science and Engineering Busch Campus 137 Winchester Road, Piscataway, NJ 08854-8029 (732) 445-3224 <a href="http://catalogs.rutgers.edu/gene-rated/nb-grad_0810/pg24361.html">http://catalogs.rutgers.edu/gene-rated/nb-grad_0810/pg24361.html</a>	Ten-E Packaging Services, Inc. 1666 County Road 74 Newport, MN 55055 (651) 459-0671 <a href="http://www.ten-e.com/index.php/package-testing/">http://www.ten-e.com/index.php/package-testing/</a>

#### **Section 2.4 TEST FREQUENCY**

- A. All testing specified shall be performed and documented.
- B. For woven poly bags, the air permeability and ultraviolet resistance tests shall, as a minimum, be performed annually and when a change in the formulation/design of the fabric is being made.
- C. The performance test for impact resistance shall be performed when a change in the formulation/design of the fabric is being made.
- D. For woven poly bags, the slide angle test shall, as a minimum, be performed inhouse for every 10,000 lineal meters of fabric production. Testing performed inhouse is not required to be performed under the specified temperature and humidity requirements. In addition, the slide angle test shall, as a minimum, be performed annually by an outside testing facility and when a change in the

# USDA

#### **United States Department of Agriculture**

- formulation/design of the fabric is being made. This testing shall be performed in accordance with all contract requirements, including the specified temperature and humidity.
- E. All supporting test and quality control documentation shall be retained and made available for review by the Government for a minimum of three years after final payment under the contract.

#### Part 3 MARKING REQUIREMENTS

#### Section 3.1 MARKINGS

- A. The bag 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 7 inches high and 12 3/4 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 6 1/2 inches high and 12 1/2 inches in total width. The three stripes adjacent USA shall be 1 1/4 inches high and printed as close to the edges of the bag as possible, not to exceed 1 1/2 inches from any edge.
- E. The USAID vertical identity, including the logo, brandname, and tagline, shall be printed in the same style as shown in the markings 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 <a href="http://www.usaid.gov/branding">http://www.usaid.gov/branding</a>.
- F. The USDA logo shall be 5 1/2 inches high and 7 3/4 inches in total width, see exhibits.



- G. The commodity name shall be 1 1/2 inch print. Immediately below the commodity name on the front and back panels insert additional commodity description in 5/8 inch print, if applicable. See Exhibit A for appropriate commodity name/additional commodity description that shall be printed on each bag.
- H. The net weight, contract number and the statement "NOT TO BE SOLD OR EXCHANGED" shall be 3/4 inch print. The bag dimensions and Standard Marking Requirement (SMR) or Language Marking Requirement (LMR) number shall be 1/2 inch print. The contract number, net weight, and SMR and LMR number shall be at the bottom of the bag, centered. See exhibits.
- I. The symbol indicating "USE NO HOOKS" shall be 2 3/4 inches in height. See exhibits.
- J. The letters or symbols used in the language markings for LMR-1, LMR-3, LMR-4, LMR-5, LMR-7, and LMR-8 should be sized approximately 1 5/8 inches, see exhibits. The language marking for LMR-2 and LMR-6 should be sized to fit as shown in the exhibits.
- K. Lot numbers, production codes or any other means of identification required to meet traceability requirements shall be as small as possible, yet legible.

#### **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: US Flag, the commodity name, the words "NOT TO BE SOLD OR EXCHANGED," USAID logo, contract number, net weight, dimensions, "SMR-1," and use no hooks symbol. 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", and use no hooks symbol. 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," and use no hooks symbol. 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," and use no hooks symbol. 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" and use no hooks symbol. 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" and use no hooks symbol. 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" and use no hooks symbol. 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" and use no hooks symbol. See exhibit LMR-4, front.

Back: US Flag, the commodity name, Arabic language panel, and "LMR-4" only. See exhibit LMR-4, back.

# USDA

#### **United States Department of Agriculture**

#### 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" and use no hooks symbol. 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" and use no hooks symbol. 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.

#### <u>Language Marking Requirement #7 (LMR-7)</u>

#### 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" and use no hooks symbol. 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" and use no hooks symbol. 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 dimensions shall be printed at the bottom of the bag, centered, see exhibits.
- C. The finished size of the circular woven polypropylene bags will be determined by the contractor, unless otherwise specified by the contracting officer.



#### 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.

### List of Commodity Names Printed on 50 Kilogram Woven Polypropylene Bags

Commodity Requirements	Commodity Name	Commodity Requirements	Commodity Name
Bulgur / Soy-	BULGUR	Dry Edible	BLACK BEANS
Fortified Bulgur (BWSF)	SOY-FORTIIFIED BULGUR	Beans (DEB)	BLACKEYE BEANS
Buckwheat	BUCKWHEAT GROATS		DARK RED KIDNEY BEANS
(BWP)	BUCKWHEAT GRITS		LIGHT RED KIDNEY BEANS
	BUCKWHEAT FLOUR		GARBANZO BEANS
Bagged Grain (KCBG)	WHEAT HARD RED WINTER		GREAT NORTHERN BEANS
	WHEAT SOFT WHITE		PEA BEANS
	WHEAT HARD RED SPRING		PINK BEANS
	WHEAT NORTHERN SPRING		PINTO BEANS
	SORGHUM		SMALL RED BEANS
	YELLOW CORN		SMALL WHITE BEANS
	YELLOW CORN		
	YELLOW SOYBEANS		
Milled Rice (MR)	MILLED RICE LONG GRAIN	Peas and Lentils (PL)	LENTILS
	MILLED RICE MEDIUM GRAIN	(/	SPLIT GREEN PEAS
	MILLED RICE SHORT GRAIN		SPLIT YELLOW PEAS
	MILLED RICE PARBOILED		SMOOTH GREEN DRY PEAS
Wheat Flour/	FLOUR		SMOOTH YELLOW DRY PEAS
Bread Flour	ALL PURPOSE		
(WFBF)	BREAD FLOUR		
50 KG	WHEAT		
Polypropylene	CORN	1	
Bags	SORGHUM		
(KCPBAGS)	SOYBEANS		
	SOYBEAN MEAL		

SMR-1 FRONT SMR-1 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb.

23 x 39

SMR-1



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb.

23 x 39

SMR-1

SMR-2 FRONT SMR-2 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED



#### **CONTRACT ABCD01234**



NET WEIGHT: 50 kg, 110.23 lb. 23 x 39

SMR-2



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED



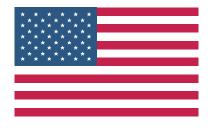
#### **CONTRACT ABCD01234**



NET WEIGHT: 50 kg, 110.23 lb. 23 x 39

SMR-2

SMR-3 FRONT SMR-3 BACK



## **COMMODITY NAME**

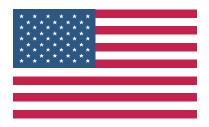






NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 SMR-3





## **COMMODITY NAME**







NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 SMR-3

TWOE1

Daga 21

SMR-4 FRONT

SMR-4

BACK



## **COMMODITY NAME**

#### **CONTRACT ABCD01234**



NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 SMR-4



## **COMMODITY NAME**



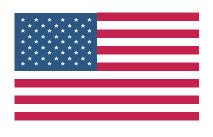
#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 SMR-4

BWSF14

Page 22

LMR-1 FRONT LMR-1 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

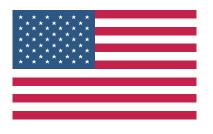
NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 LMR-1



LMR-2 FRONT

LMR-2

BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 LMR-2



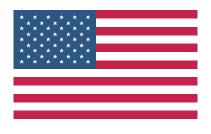
## **COMMODITY NAME**

د امریکا د متحده ایالاتو د خلکو سوغات

تحفهء مردم الله المريكا

LMR-2

LMR-3 FRONT LMR-3



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED



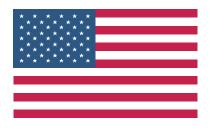


#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb.

23 x 39

LMR-3



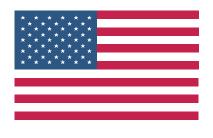
**BACK** 

## **COMMODITY NAME**

Gift of the People of the United States of America

LMR-3

LMR-4 FRONT LMR-4 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb.

23 x 39

LMR-4



LMR-5 FRONT



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED







NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 LMR-5



**BACK** 

LMR-5

## **COMMODITY NAME**

미국에서

보내온 선물

LMR-5

LMR-6 FRONT LMR-6



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED





#### **CONTRACT ABCD01234**

NET WEIGHT: 50 kg, 110.23 lb. 23 x 39 LMR-6



BACK

## **COMMODITY NAME**

د امریکا د متحده ایالاتو د خلکو سوغات

تحفه، مردم ایالات متحده امریکا

I MR-6

LMR-7 FRONT LMR-7 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED



#### **CONTRACT ABCD01234**



NET WEIGHT: 50 kg, 110.23 lb. 23 x 39

LMR-7



## **COMMODITY NAME**

Gift of the People of the United States of America

LMR-7

Page 29

LMR-8 FRONT LMR-8 BACK



## **COMMODITY NAME**

NOT TO BE SOLD OR EXCHANGED







NET WEIGHT: 50 kg, 110.23 lb. 23 x 39

LMR-8



## **COMMODITY NAME**



LMR-8