

USDA COMMODITY REQUIREMENTS

**MC5
MACARONI AND CHEESE
FOR USE IN DOMESTIC PROGRAMS**

Effective Date: 09/01/05

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Part 1 COMMODITY SPECIFICATIONS

Section 1.1 COMMODITIES

A. Pasta Specifications

- (1) All wheat shall be tested for vomitoxin in accordance with procedures approved by Federal Grain Inspection Service (FGIS). Any wheat testing higher than 2 parts per million (p.p.m.) shall not be used in production of the commodity. The final product shall not contain more than 1 p.p.m. of vomitoxin.
- (2) The commodities delivered shall meet the requirements as specified in the Commercial Item Description for Pasta Products, Enriched (CID) A-A-20062D (May 20, 2005), available at: <http://www.ams.usda.gov/fqa/aa20062d.htm>, except for the following:
 - (a) Only semolina flour shall be used.
 - (b) Only enriched elbow style macaroni shall be used.
 - (c) Size of the elbow style macaroni shall be:

Thickness	0.034 inch to 0.057 inch
Diameter	0.190 inch to 0.220 inch
Length (Outer Curvilinear)	1/4 inch to 1 1/2 inch

B. Cheese Sauce Specifications

- (1) The dry cheese sauce shall dissolve completely when mixed vigorously in hot water and shall conform in every respect with the following product characteristics:

Color	A dry mix with a pale yellow/peach color (viewed under normal, cool white florescent lights) similar to Pantone 148U with a slight speckled appearance.
Aroma	Mild cheddar cheese.
Flavor	Milk cheddar cheese flavor, with pronounced notes of tanginess, very slightly bitter and slightly salty. No objectionable aftertaste.
Mouth-feel	Smooth, moderately tick, no lumpiness.
Gel Strength	Weak.
Viscosity	Bostwick @ 160 degrees Fahrenheit for 30 seconds: 4.5 – 7.5 cm. (target 6.0 cm.).
Preparation	Shall not require the addition of milk or butter to the recipe.

- (2) Microbiological standards - The dry cheese sauce shall not exceed the

following microbiological standards:

SPC	N/A
Coliform	N/A
Staph. Aureus	<100/g
Salmonella	Negative
Yeast/Mold	N/A

(3) Nutritional requirements - Per 1/4 cup (25.8g.) per dry mix:

Amount Per Serving	Target	Maximum
Calories	110	140
Calories from Fat	45	60
Total Fat	5 grams	6 grams
Saturated Fat	2 grams	2.4 grams
Sodium	870 mg	1050 mg
Cholesterol	5 mg	6 mg

(4) The average analytical results of the dry cheese sauce sampled shall not exceed the specified viscosity, nutritional, and microbiological requirements.

Section 1.2 WARRANTY

The product shall have a shelf life of at least one year from date of manufacturer. Product shall not be manufactured more than 45 days prior to shipping.

Section 1.3 QUALITY ASSURANCE

- A. The contractor shall perform the product testing and quality analysis to ensure that the product meets the commodity specifications. The results shall be evidenced by a Certificate of Analysis (COA). 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.

Section 1.4 QUALITY DISCOUNTS

If the product does not meet the quality specifications of this contract but falls within the discounts listed below, 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:

Elbow Style Macaroni Discounts

Excess Ash		Excess Checks, Broken Units and Black Specs	
1.11% - 1.15%	\$0.06	11.0% - 15.0%	\$0.06

1.16% - 1.19%	\$0.12	16.0% - 20.0%	\$0.12
1.20% - 1.25%	\$0.21	21.0% - 25.0%	\$0.21
Excess Moisture			
13.1%	\$0.03		
13.2%	\$0.06		
13.3%	\$0.09		
13.4%	\$0.12		
13.5%	\$0.15		

Note: The above discounts are 60 percent of the pasta product discounts as elbow macaroni consist of 60 percent of the macaroni and cheese net weight.

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 CORRUGATED FIBERBOARD CONTAINERS

- A. Twelve (12) meal units each shall be packed into a single fiberboard shipping container constructed of a minimum 32-pound ECT corrugated fiberboard. The closure and sealing of outer flaps with tape or adhesive shall be in accordance with UFC Rule 41, Section 9, as amended. The inner and outer flaps shall be drawn together as closely as possible to ensure a compact and tight pack.

- B. A meal unit is designated as one (1) 10-ounce package of dry blended cheese sauce enclosed within a fiberboard carton containing 1-pound of enriched elbow style macaroni.
 - (1) Cartons shall be constructed of at least 0.016 inch solid food grade fiberboard.
 - (2) The dry blended cheese sauce shall be individually packaged in vapor/moisture resistant foil laminated packages and hermetically sealed.

Section 2.4 UNITIZATION REQUIREMENT

Shipments shall comply with the following unitization requirements:

- A. Unless otherwise specified by the Government, all shipments of packaged products shall be unitized (palletized and stretch wrapped).
- B. Pallets shall be:
 - (1) Constructed to facilitate the safe handling and transportation of the packaged product, as a unit, without loss or damage.
 - (2) A Number 2, four-way, reversible flush stringer with no broken runners or slats.
 - (3) Suitable for use in the shipment of food products.
- C. Plastic stretch wrap shall be:
 - (1) Constructed of a plastic film which is to be stretched a minimum of 50 percent beyond its original length when stretched around the pallet load.
 - (2) Applied as tightly as possible around all tiers of the palletized shipping containers. The shipping containers shall be held firmly in place by the stretch wrap.
- D. Pallet loads shall be:
 - (1) Stacked in such a way as to minimize the amount that shipping containers overhang the edges of pallets.
 - (2) Blocked and braced or otherwise loaded into the conveyance in a manner that prevents shifting during transit.

Part 3 MARKING REQUIREMENTS

Section 3.1 GENERAL REQUIREMENTS

Cartons and shipping containers shall be plainly marked in accordance with Exhibits A through F. All markings shall be of sufficient size to stand out prominently. The markings shall be arranged substantially as shown in the exhibits and shall be in direct proportion to the available printing surface. No markings are required on plastic balers.

Section 3.2 CARTONS

- A. The base art color of the primary container shall be PMS 122 and black, full bleed.

- B. The markings as shown in Exhibits A through C illustrate base art only. In addition, the applicable nutritional information shall be printed in the space provided.

Section 3.3 VENDOR CODE

A vendor code, furnished by the Government, shall appear on all primary containers, corrugated fiberboard shipping containers, and paper balers. The vendor code identifies the contractor but does not always identify the plant of origin. In addition to the vendor code, contractors have the option of printing the plant code on all containers.

Section 3.4 MONTH/YEAR OF PACK

- A. The month/year of pack shall appear on all primary containers having a net weight greater than ten (10) pounds and shall appear on all primary containers, regardless of net weight, when transparent plastic balers are utilized.
- B. The month/year of pack shall appear on all corrugated fiberboard shipping containers and paper balers.
- C. The month/year of pack shall be the month/year of shipment as required under the contract.
- D. A date fill code may be applied in addition to, but not in lieu of, the month/year of pack.

Section 3.5 LOT CODE

A lot code unique to each lot shall be legibly marked on all primary containers, corrugated fiberboard shipping containers, and paper balers. Contractors may use any type of lot coding system provided a unique code is used to identify each lot under a contract. Contractors shall provide the Government's audit personnel or the contracting officer with an explanation of the lot coding system utilized.

Section 3.6 NUTRITIONAL INFORMATION

Nutritional information shall be applied to all primary containers in accordance with the nutrition labeling regulations of the Food and Drug Administration (FDA) as specified in 21 CFR Part 101.

Section 3.7 SAFE STACKING INSTRUCTIONS

Corrugated fiberboard shipping containers shall be marked to show the maximum safe stacking height. This should be expressed as follows: "Do not stack above ___ tiers per pallet, ___pallets high." It is the responsibility of the contractor in cooperation with the shipping container manufacturers to determine the safe stacking height.

Section 3.8 CARRIER REGULATIONS

Containers may be marked with a certification or stamp to indicate compliance with the applicable freight classification or other carrier shipping requirements.

Section 3.9 UNIVERSAL PRODUCT CODE

- A. A Universal Product Code (UPC) and symbol shall appear on each primary package, and a UPC shipping container code called Interleaved 2 of 5 (I 2/5) shall appear on each shipping container as specified below. In accordance with the UPC guidelines published by the Uniform Code Council, Incorporated, a 12-digit UPC (code and symbol) shall appear on each primary package and a 14-digit I 2/5 bar code shall appear on each shipping container. For contrast in scanning, a white patch or block shall be used as background for bar codes applied directly to metal containers. A high degree of contrast is required for bar codes applied directly to plastic containers. The UPC guidelines describe the requirements for the proper placement, printing, readability, and scanability for bar coding.
- B. The format and code to be used is as follows:

Commodity	Pack Size	Primary Container Code	Shipping Container Code
Macaroni and Cheese (Dry)	26 ounces	7 15001 02436 7	1 07 15001 02436 4

- C. The complete code including the check digit (the last digit of the applicable UPC code) shall be printed in machine-readable and human-readable form. The start and stop indicators shall be included in the bar code symbols. The UPC system is a commonly used method of bar coding merchandise in commercial channels. Package manufacturers, printers, and film master suppliers are familiar with this symbology. The Government has acquired a unique manufacturer's identification number for this application.
- D. Contractors need not join the UCC. Further information concerning UPC codes and symbols may be obtained by contacting the:

GS1 US
7887 Washington Village Drive, Suite 300
Dayton, OH 45459-8605

Phone: (937) 435-3870
Fax: (937) 435-7317
Website: <http://www.gs1us.org/>

Section 3.10 RECYCLE SYMBOLS

- A. The contractor shall place the recycle symbol and the words "PLEASE RECYCLE" somewhere on the surface of each primary and shipping container which is widely recycled. By "widely recycled," it is meant recycled in most communities. The words "PLEASE RECYCLE" are to be placed under the recycle symbol. The following packaging materials are widely recycled and should be marked with the symbol and statement in accordance with Exhibit I.
 - (1) Corrugated fiberboard (cardboard) boxes.

- (2) Steel (tin) cans.
 - (3) High density polyethylene (e.g., vegetable oil and liquid shortening bottles)
- B. Packaging materials which are not required under the contract to be printed (e.g., certain plastic pouches, bags, and stretch films) need not be marked even though they can be recycled in many communities.

Section 3.11 OTHER MARKINGS

- A. The contractor's company name and/or the container manufacturer's name may be printed on each container as small as possible, yet legibly.
- B. On exhibits where U.S. RDA Percentages are required, it is acceptable for the contractor to place an asterisk beside the nutrient(s) and to footnote on the panel "* content less than 2% U.S. RDA of these nutrients."
- C. No markings other than those permitted under this contract shall appear on containers unless required or approved by the Government.

Section 3.12 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.

SIDE PANEL

FRONT PANEL

CARE OF PRODUCT:

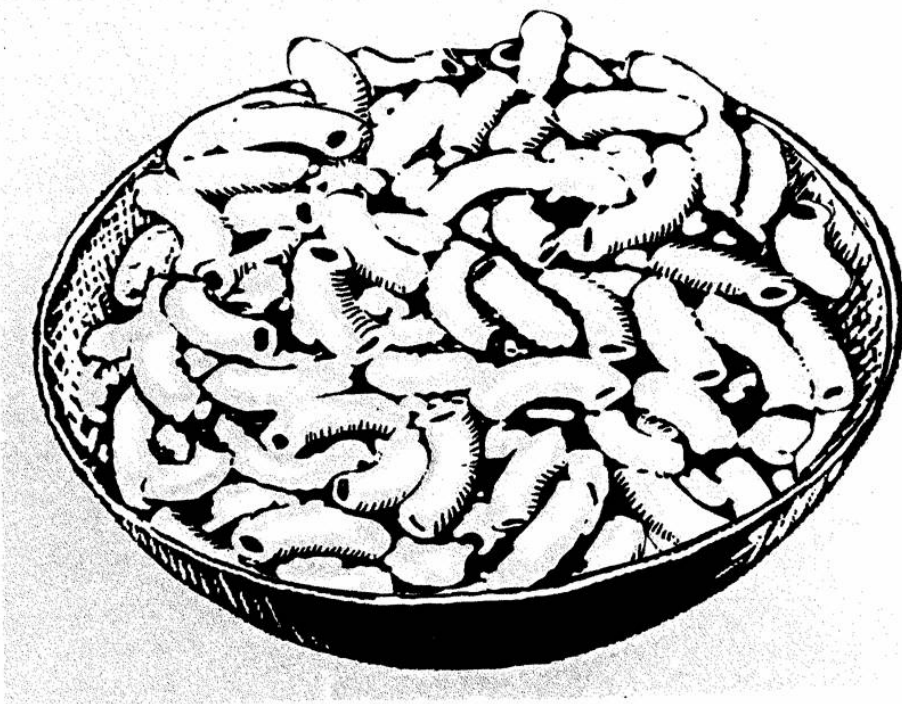
Store unopened box in a cool, dry place.

CONTENTS:

About 3 2/3 cups uncooked macaroni, 10 oz. cheese sauce mix.

To receive a copy of a nutrition education pamphlet, write to: Food and Consumer Service,
Special Nutrition Programs, 3101 Park Center Drive, Alexandria, VA 22302.

Macaroni & Cheese



DISTRIBUTED BY USDA IN COOPERATION
WITH STATE AND LOCAL OR
TRIBAL GOVERNMENTS
FOR DOMESTIC FOOD
ASSISTANCE PROGRAMS

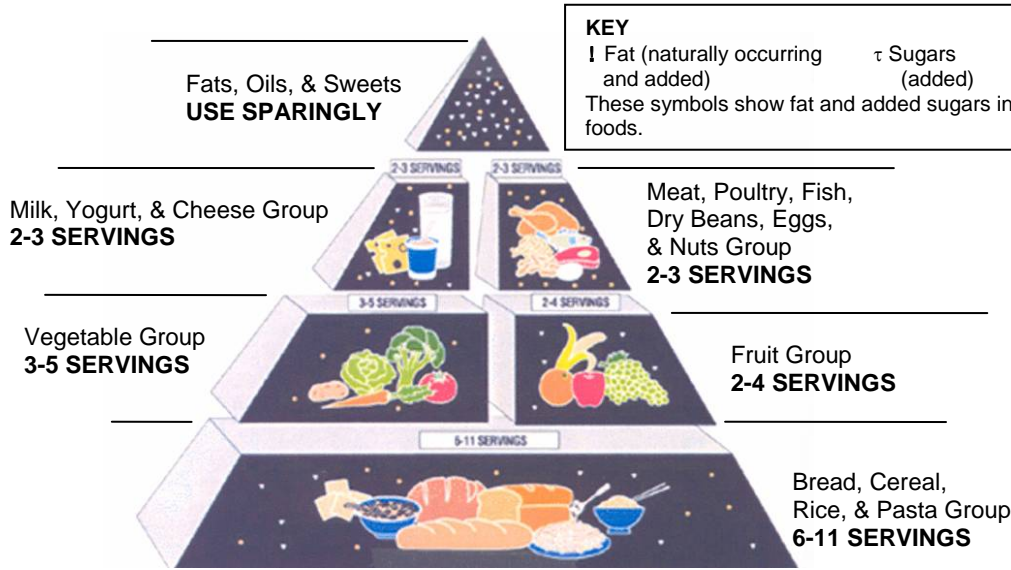
NOT TO BE SOLD OR EXCHANGED

NET CONTENTS: 26 OUNCES (1 LB. 10 oz.) (738 GRAMS)

BACK PANEL

SIDE PANEL

**FOOD GUIDE PYRAMID
A Guide to Daily Food Choices**



KEY
! Fat (naturally occurring and added) † Sugars (added)
These symbols show fat and added sugars in foods.

Nutrition Facts

Insert nutritional information in accordance with the nutrition labeling regulations of the Food and Drug Administration (FDA) as specified in 21 CFR Part 101.

COOKING DIRECTIONS

Macaroni:

- Heat 12 cups water to boiling.
- Stir in 1 pound macaroni.
- Boil uncovered 13 to 16 minutes or until desired tenderness, stirring occasionally.
- Drain macaroni well. Return to pan.

Cheese Sauce:

- In a saucepan, add cheese sauce mix to 4 ½ cups hot water.
- Mix well until cheese sauce is dissolved.
- Heat sauce until boiling, stirring occasionally.
- Pour sauce over drained macaroni and mix well. Serve.
- If desired, pour into baking dish and bake uncovered at 350°F for 20 to 30 minutes.
- Refrigerate any unused portions in a covered container.
- Makes about 11 (1 cup) servings.

SERVING IDEA

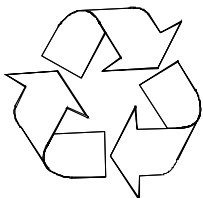
Macaroni and Cheese with Tuna

- To cooked macaroni and cheese, add:
- 1 can (12 ½ ounces) tuna, drained well and flaked.
 - ½ cup chopped green pepper
 - ½ cup chopped onion

INGREDIENTS

REHEATING DIRECTIONS

Add 1 tablespoon milk or water to each 1 cup serving. Heat in saucepan on top of stove.

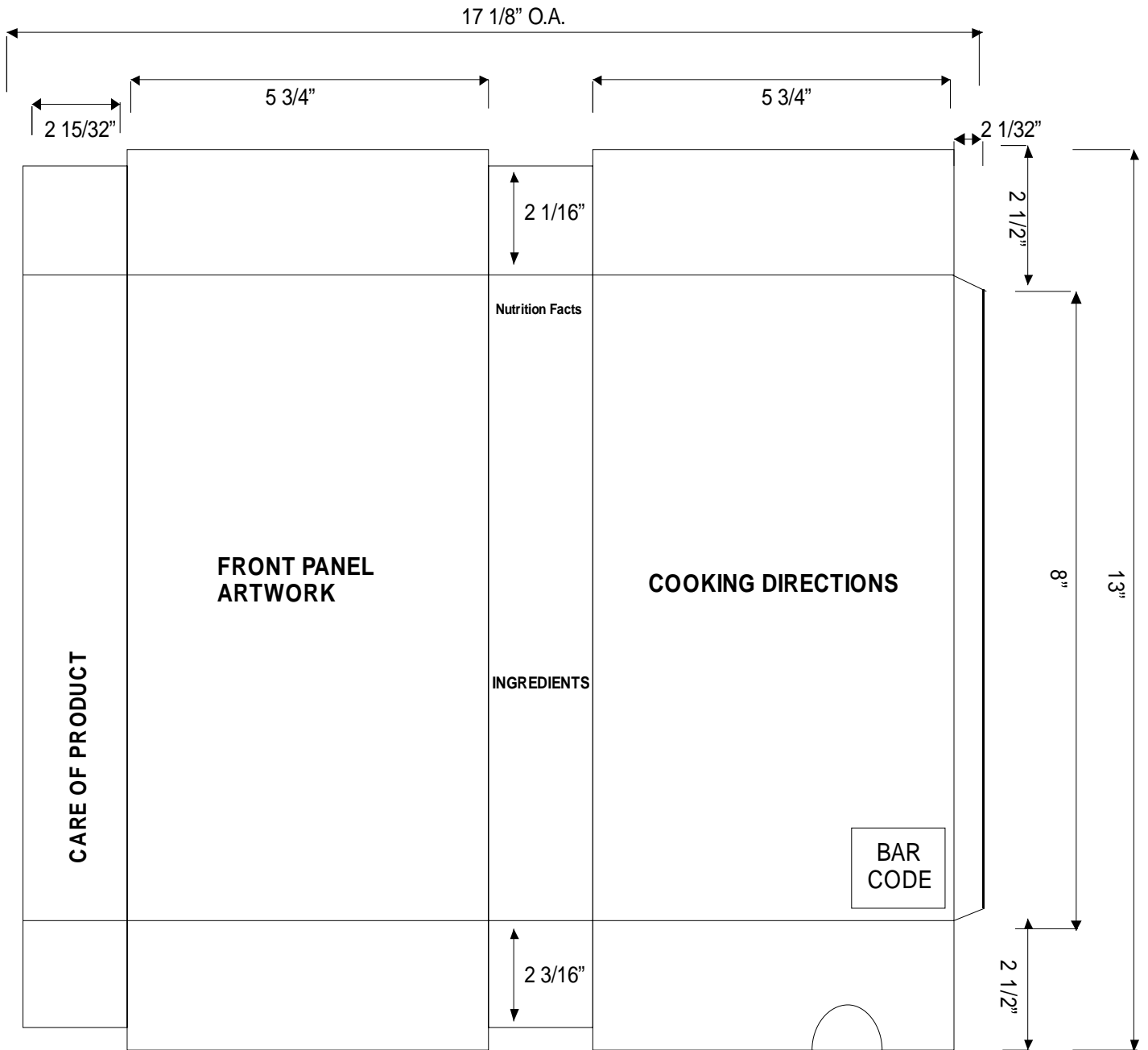


BAR CODE

PLEASE RECYCLE

**MACARONI AND CHEESE
EXHIBIT C**

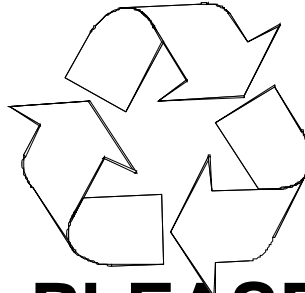
PACKAGE SIZE SPECIFICATIONS FOR MACARONI AND CHEESE



USDA SYMBOL










RECYCLABLE SYMBOL



**PLEASE
RECYCLE**

PLASTIC MATERIALS CODE SYSTEM

CODE	<u>MATERIAL</u>
 PETE	_____ Poly-Ethylene Terephthalate (PET)
 HDPE	_____ High Density Polyethylene
 V	_____ Vinyl/Polyvinyl Chloride (PVC)
 LDPE	_____ Low Density Polyethylene
 PP	_____ Polypropylene
 PS	_____ Polystyrene
 OTHER	_____ All Other Resins